

**ELECTRICAL
MECHANICAL
RECOMMENDATIONS**

**TRAFFIC CONTROL
SAFETY DEVICES
VENTILATION
LIGHTING
METERS**

C. ROBERT CHURCHILL

Catalog—No. 100

NEW ORLEANS

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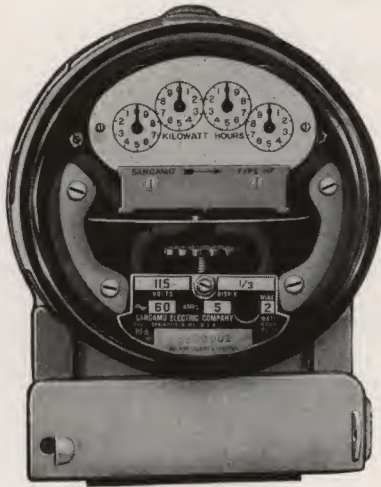
RECOMMENDATIONS

You will find in these pages illustrations and descriptions of a limited number of the best and most popular appliances and devices selected from lines of manufacturers represented by the undersigned. These are items which have been used widely enough and tested thoroughly enough to prove their superiority on the points of Safety, Economy, and Performance. Many of the items included are especially adaptable to Rural Installations.

In no respect is this a catalog, but any page may suggest to you the need for a detailed bulletin to cover the line it represents. Therefore, if you are interested in anything you see herein, or if a glance at these pages should suggest some type of appliance or equipment or device about which you want information, a letter or a card addressed to us at the Louisiana Building, New Orleans, will bring you detailed catalogs, special bulletins, or whatever information you request.

C. ROBERT CHURCHILL.

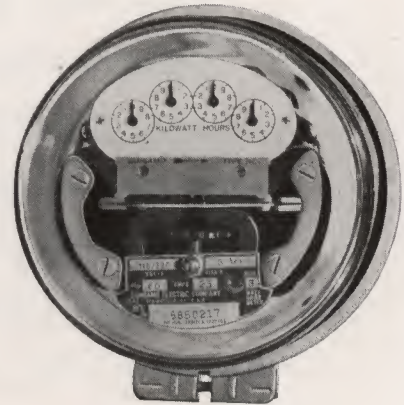
SANGAMO METERS



TYPE HFA
Conventional Service Meter

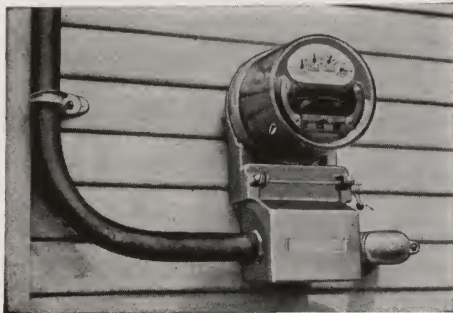
Sangamo Type HFA conventional service meters and Type HFS socket meters are single-phase, house type watt-hour meters—"the modern meters for modern loads". Type HFA meter, together with pull box and cover, forms a diversion-proof, enclosed wiring installation suitable for indoor or outdoor use.

Present-day Sangamo Meters consist of a complete line—a line designed to meet any modern metering requirement. The excellent characteristics of previous designs of Sangamo Meters have been maintained, including such modern developments as long range overload and temperature compensation.



TYPE HFS
Meter For Socket Mounting

The Type HFS meter, with the meter element similar in all respects to the HFA meter, is built in the socket type, detachable construction. It may be used with a wide selection of sockets, for either outdoor or indoor installation.



TYPE HFA
Installed Complete With Pull Box



TYPE HFS
Installed Complete With Socket

TYPE L-2

Two-Element Single Disk Meters, Designed for "A" and "S" mountings.

TYPE HV

Single-phase Watthour Meter Combined With Synchronous Motor Time-Switch.

TYPE HG

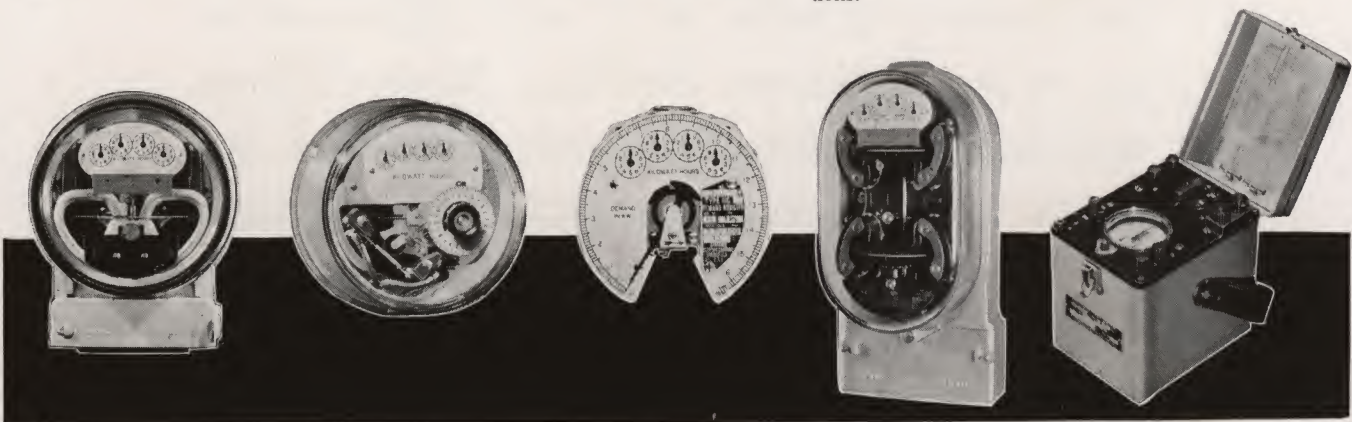
Maximum Demand Register, Applicable to Any Sangamo Service Type A. C. Meter.

TYPE HF

Two-Disk Polyphase Watthour Meter. Highest Accuracy Under Variable Load Conditions.

TYPE J

Portable Test Meter, 5 or 3 Current Ranges.



Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

SANGAMO TIME-SWITCHES



FORM K

Time-Switch is sturdily built, simple in operation, self-starting, equipped with silver contacts.

The complete line of Sangamo electrically operated time-switches can be divided into two major divisions: one synchronous motor operated, and the other electrically wound. These divisions can be further subdivided by types of contact: one the silver button contact; and the other the mercury tube. Any of these can be supplied for use on alternating current circuits, and the electrically wound, mercury tube types only for use on direct current circuits. This wide variety of combinations fulfills any requirement for a switching operation from the simplest to the most complicated form. (For outdoor installations, special weather-proof cases are furnished, with or without window.)

THE FORM K, synchronous motor time-switch, is admirably suited to control all alternating current operations, where no variations are required for a daily sequence. It is operated by a slow-speed, self-starting motor and can be set for 1 to 3 daily "on" and "off" operations. Pure silver contacts are used. Either "on" or "off" levers can be tripped manually without affecting the sequence of subsequent operations.

FORM VS

Built in a wide variety of combinations for alternating current circuits, from the simple single-pole, single-throw, to the triple-pole, double-throw. Can be used in combinations providing two-circuit, duplex, outdoor and astronomical dial switch.

FORM VW

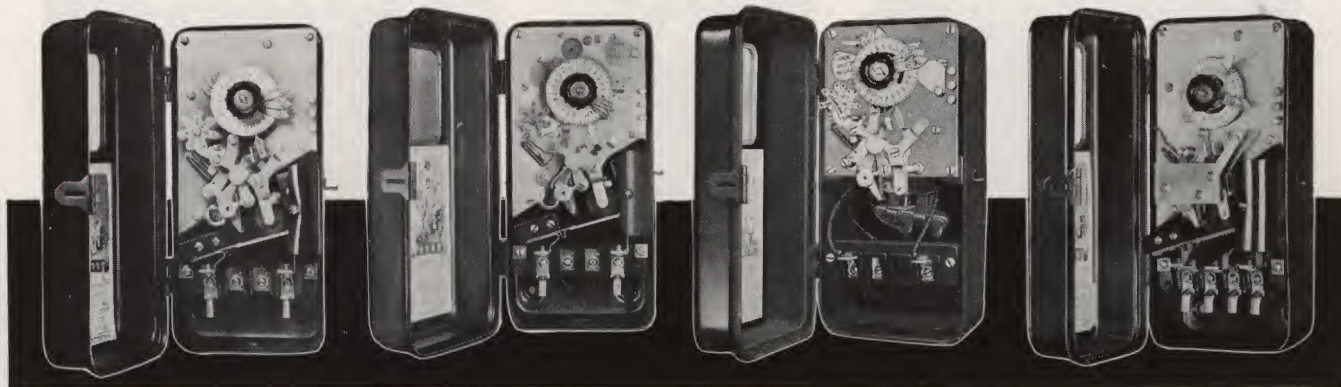
Electrically wound with ten-hour reserve for A. C. operation. Jewelled balance, non-magnetic, non-rusting hair-spring. Omitting device omits "on" operation for any days desired. Can be operated manually without affecting subsequent operations.

FORM TW

Electrically wound for direct current service. Provides 3½ minute carry-over during current interruptions. Omitting device included. Mercury tube contacts. Can be operated manually, without affecting subsequent operations.

TWO-CIRCUIT

Either the self-starting synchronous motor Form VS, or the electrically wound Form VW Time-Switches can be supplied in the two-circuit construction. Can be operated manually, without affecting subsequent operations.



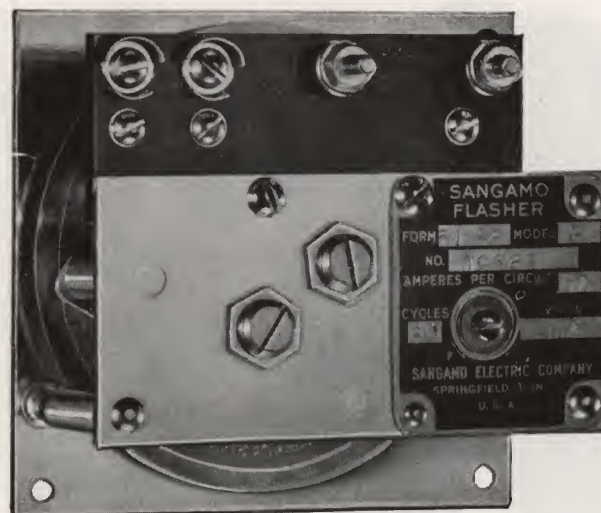
Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

SANGAMO SIGN FLASHERS

Sangamo Flashers are built to give trouble-free and dependable service for years. They are simple and sturdy in construction and will control any type of display from a simple "off and on" effect to the most spectacular action. Silver contacts are used in all flashers. These contacts will not pit or stick and will insure long life without replacement. Heat or cold, or short circuits in the sign do not affect the flasher. Ball bearings, lubricated in assembly, need no further attention during the life of the unit. The slow-speed induction disk motor has a simple speed adjustment, the fast speed being two times greater than the slow speed.

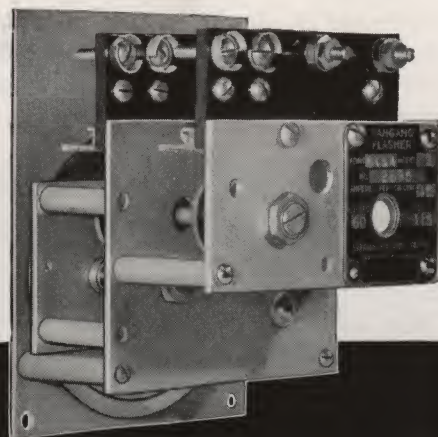
MODEL 3 "Alternate" Flasher fills the need for a small, inexpensive, but dependable flasher; ideal for the control of small signs. The contacts are rated at 15 amperes. All steel parts are heavily cadmium plated.



"Alternate" Flasher, Model 3, Form 61A2

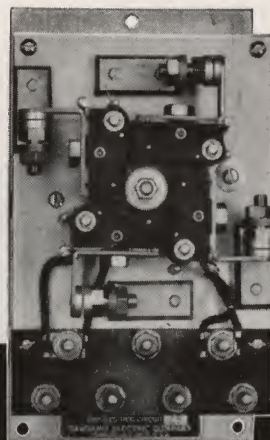
MODEL 3

The Model 3 Speller Flasher uses the Model 3 "Alternate" Flasher contacts, rated at 15 amperes, 115 volts, alternating current. The cams are made of canvas base bakelite, and are cut to meet the different flashing cycles as required. The cams are all cut special, so that for each circuit as many operations per cycle per contact, as desired, may be supplied.



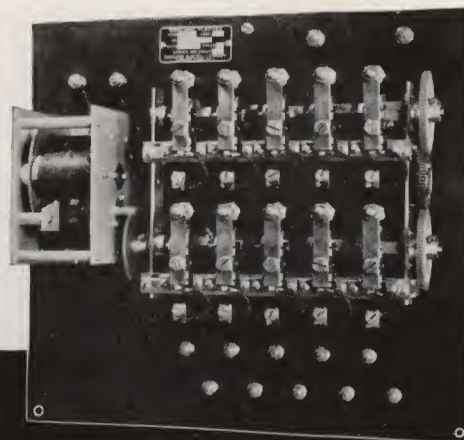
MODEL 2

Model 2, High Speed Border Chaser Flashers, are small and compact, for installation inside the sign. Silver contacts allow the flasher to be operated in any position; no leveling or final adjustment after installation is needed. The cost of operation of this flasher is very small, the motor draws less than thirteen watts.



MODEL 4

Speller Flashers, Model 4, are so designed that they can be built to meet any requirement in the control of electric signs. Each contact is controlled by individual split cams. One cam controls the "on" operation and the other one the "off" operation. The silver contacts on this model are in two sizes, 25 and 50 amperes, alternating current. The 50 ampere contact is for operations, not exceeding ten per minute.



Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

SANGAMO CONTACTORS

MODEL 6—FOR GENERAL DUTY

Sangamo Model 6 Contactors are for time-switch, switch-board and remote control duty, or any place a sturdy contactor is required where the frequency of operation does not occur oftener than every two minutes. Model 6 is made in 2, 3 or 4 poles with ratings of 60 and 100 amperes. When specified, it is furnished with two coils and a mechanical latch. The mechanical latch is for use where specifications call for absolute quiet between operations.

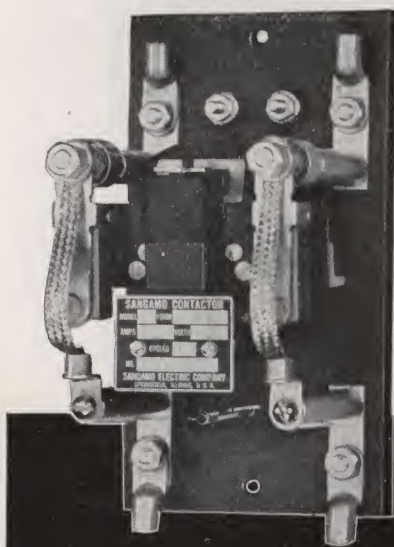
MODEL 8—FOR FLASHING DUTY

Model 8 Contactors are for flashing duty where speeds do not exceed 30 operations per minute. This model is similar in size and appearance to Model 6, the chief difference being that Model 8 Contactors use contacts suited for higher speed operation.

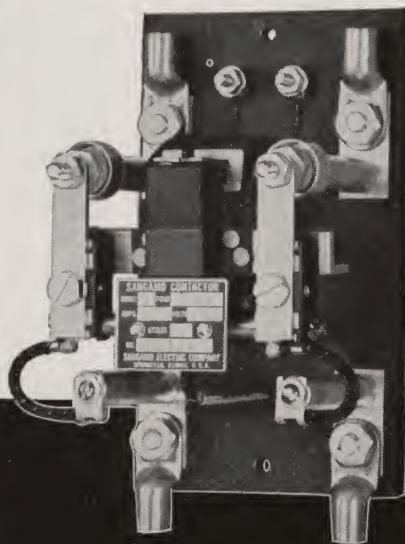
MODEL 7

Sangamo Model 7 Contactors are for flashing duty up to speeds of 200 operations per minute. These contactors operate with contacts normally closed; the contacts are open only when current is applied to coil.

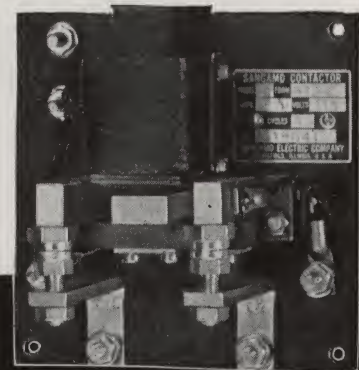
MODEL 6



MODEL 8



MODEL 7



The products featured on these pages are representative of the more popular items of the complete Sangamo line. Complete information will gladly be furnished without obligation on any of the included, or related items.

STANDARD DISTRIBUTION TRANSFORMERS

Built to AIEE and NEMA Specifications

Standard Transformers have been manufactured and used by the electrical industry for eighteen years. Dependable service and guaranteed quality have made them recognized as the equal of any make of transformer on the market. Each transformer manufactured by the Standard Transformer Company is custom-built by production men who pride themselves on the quality of their work. Naturally there is a noticeable difference in favor of the workmanship of a transformer built in this manner, as compared with one that has been built on a production line where mass production is essential and where painstaking assembly methods are of secondary importance.

Standard transformers are built only of the best materials that can be had. The core steel is of the best grade. It is annealed to reduce rolling strains and is treated on both sides of each lamination with a special coreplate varnish, which reduces eddy current losses to a minimum. Coils are thoroughly insulated against short circuits and flash-overs by layers of pressboard and varnished cambric. Coil windings consist of 99.9% pure copper wire insulated with paper and cotton of great dielectric strength. Great care is taken to center the high-voltage coils over the low-voltage coils, to provide perfect magnetic balance. All tanks are fabricated from copper-bearing steel, highly resistant to rust and corrosion. Seams are arc-welded and tested under pressure to provide ample assurance that each tank is oil tight.



333 KVA, single phase, Distribution Transformer. 2300—220/440 volts. Tank size typical of transformers rated 333 to 500 KVA.



200 KVA, single phase, Distribution Transformer. 2300—115/230 volts. Tank sizes typical of transformers rated 150 to 250 KVA.

The tank finish is tough, oil-proof and flexible to expansion and contraction of tank metal; resistant to weather, and will maintain its attractive appearance through long years of service. Standard transformers are designed for every class of service. The following bulletins are furnished for general distribution:

Signalling Transformers	No. S-100
Pyranol-Cooled Transformers	No. S-101
Dry Type Transformers	No. S-201
Rural Transformers	No. S-301
Distribution & Power Transformers	No. S-401
Current & Potential Transformers	No. S-501
Testing Transformers	No. S-601
Street Lighting Transformers	No. S-701

Your written request for any or all of these Bulletins will receive immediate response.

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

STANDARD DRY-TYPE TRANSFORMERS

Built to AIEE and NEMA Specifications

Standard air-cooled dry-type transformers are efficient, compact units for outdoor or indoor service in restricted locations. They eliminate need for fireproof or protective structures which are compulsory for the oil-cooled type. They can be installed near their load centers, thus eliminating copper losses and drops in secondary voltages. Exact design and close supervision of assembly enable these transformers to be installed in any location without fear of fire or interrupted service. They may be used in any insured building when installed according to the National Electric Code, and are built in standard ratings up to 50 KVA, 2400 volts and lower, for all commercial frequencies. With exception of certain types, mentioned below, they are of the shell-type core-and-coil design, therefore of economical construction and efficient operation in the lower voltage classes. Cores are of non-aging, varnish-coated, low-loss, silicon steel, sheared, stacked, and bound into core legs. Joints between legs are of interleaved laminations held in position by steel channel clamps bolted against each core. No moisture can enter the coil windings.

TYPE-MC TRANSFORMERS are for outdoor service, sizes from .050 to 10 KVA. Core and coil elements of shell-design, thoroughly insulated against short circuits and flash-overs. Coil windings are of 99.9% pure copper wire insulated with paper and cotton of great dielectric strength. Seams of all cases are arc-welded and are tested under pressure to assure that each housing is completely weatherproof. After core and coil structure is bolted in position, the case is filled with a moisture-proof compound that cements the entire structure into a solid unit.

TYPE-MCT 3-PHASE transformers differ from the single-phase type in that they incorporate the core-type design in their construction instead of the shell-type, thus offering greater heat-radiating facility, necessary on account of the increased amount of copper used in 3-phase coil windings. Otherwise they are identical with the single-phase type.

TYPE-MD TRANSFORMERS are built in sizes from 3 to 50 KVA for indoor service only. Core and coil design is similar to that of the MC type, but size of ventilating ducts is increased. Case enclosing core and coils is of expanded metal mesh, an improvement over the old perforated-metal case. Expanded metal mesh gives a light, durable enclosure which allows air to circulate freely through core and coils, thereby dissipating the heat. MD transformers, 25 KVA and smaller, are wall-mounted and equipped with proper wall-mounting brackets. Those rated above 25 KVA are floor mounted and provided with steel channels which raise the base from the floor and provide means for bolting it securely.

TYPE-MDT 3-PHASE transformers are of the 3-legged core-type design. Coils are wound on each leg of the core, dividing the total number of windings into three sections, thus reducing voltage carried by each coil, and exposing a greater amount of copper to the air. Case construction is similar to that of Type MD.

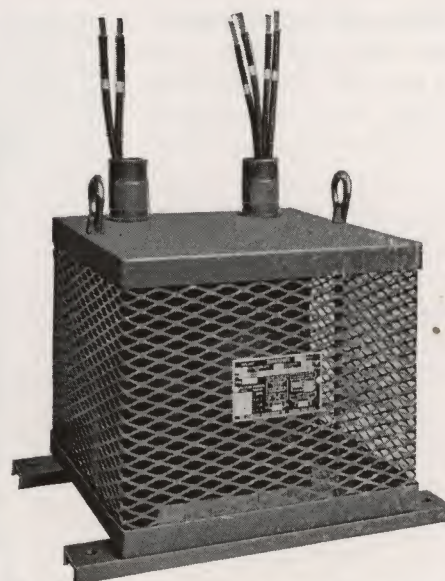
TYPE-MCB SINGLE-PHASE transformers are from .050 to .500 KVA, for indoor service only. They consist of cores and coils of MC transformers and are equipped for wall or switchboard mounting.

TYPE-MCA GENERAL-PURPOSE Auto-Transformers are built in any desired rating from .150 KVA up, and have the same general construction as other dry-type transformers, except that primary and secondary coils are combined into one winding. For indoor or outdoor service their case and terminal construction is identical with either MD or MC transformers. Smaller and more economical than others designed to carry the same load within their voltage rating, but cannot be used for insulating one circuit from another. Where auto-transformers are not permitted, types MC, MD and MO inductively coupled, continuous duty transformers for 2400 volts or lower are available.

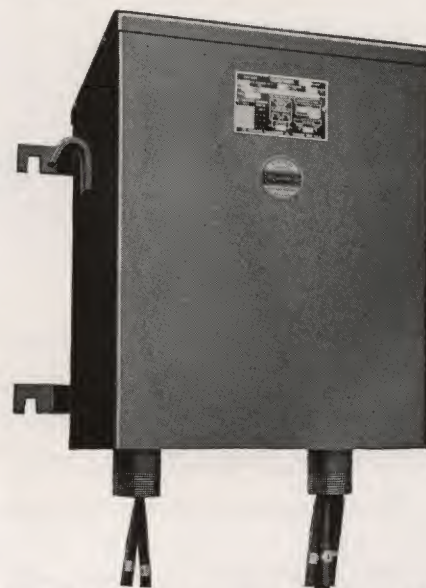
OTHER TYPES available include Type MTQ Phase-Changing auto-transformers, Type-AB Booster auto-transformers (to raise voltage of single or 3-phase systems to any desired ratings), Type-MV auto-transformers for high intensity mercury vapor lamps, Signalling transformers, and,

SPECIAL PURPOSE TRANSFORMERS

Built for customers who require transformers for special duty—detailed drawings and technical information furnished on request.



Type MD Transformer, showing construction typical of ratings 37½ to 50 KVA inclusive. For floor mounting only.



Typical Type MC Transformer, 1 to 10 KVA, inclusive, for wall or cross-arm mounting.

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

STANDARD RURAL LINE TRANSFORMERS

Built to AIEE and NEMA Specifications

Standard's Type-AR transformers for Rural Line Service are produced in the following sizes: 1, 1½, 3, 5, 7½, 10, 15 and 25 KVA. These Rural Transformers are designed to operate on either a 3-phase, four-wire, grounded neutral or a 3-phase, three-wire, line-to-line system, at voltage ratings of 2400, 4800, 7200, or 7620 volts, with their equivalent Y voltages of 4160, 8320, 12450, and 13200 volts, respectively. If transformers with a capacity greater than 25 KVA are desired, regular Type A High-Efficiency Distribution Transformers are available in any requested size and voltage rating.

Core and Coil Designs

Core and coil design of Type-AR Transformers consist of a two-legged core built from non-aging, low-loss, silicon-coated steel, with coil wound in two separate sections, one on each leg of the core. This construction has the following advantages:

Advantages

1. Radiation of heat is practically doubled as compared with that of the single coil type, due to a much larger area of coil surface being exposed to the cooling oil.
2. Efficient cooling is assured by free and effective oil circulation, through the coils, due to the fact that the coil ends are not blanketed by core steel as in the shell or modified shell design.
3. Mechanically the core is of the simplest construction, thereby eliminating unnecessary clamping devices and extraneous metal parts which increase material costs without any corresponding increase in transformer efficiency.
4. The clearances between the high voltage windings and the grounded core are greater than in other types thus affording better protection against flashovers.



3 KVA Rural Transformer, single-phase, 60 cycles, 7620—120/240 volts.

As the transformer coils are wound on each leg of the core, thereby dividing the total voltage carried by the transformer into two sections, the reduced voltage carried by each coil lessens the danger of insulation failure between the layers of copper wire that comprise the coil windings. Great care is taken to obtain perfect centering of the high voltage coils over the low voltage coils in order to secure perfect magnetic balance. This is necessary in order to guard against the danger of the coils telescoping under the force of short circuits caused by line disturbances which frequently occur on rural distribution systems. Paper and cotton insulation of great dielectric strength prevent short circuits from arising on

coil turns where high voltage flashovers are most likely to occur.

The mechanical balance obtained by this type of construction enables the transformer to be fastened securely upright against the pole, without any of the forward sag which is characteristic of other types.

This factor eliminates the necessity of using expensive suspension harness to prevent the transformer from breaking loose from its moorings.

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

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STANDARD RURAL LINE TRANSFORMERS

Tank and Cover

Tanks for Type-AR Transformers are fashioned from copper bearing, rust resisting steel plate. Each seam is firmly welded and adequately tested to provide ample assurance that the tank is oil tight. Steel channels, which form a rigid core clamping structure, are welded to the inside walls of the tank. The core and coil element is then inserted into the channels and bolted securely in position. This method of assembly prevents any dislodgement of the core and coil structure which would seriously impair or entirely destroy the value of the transformer.

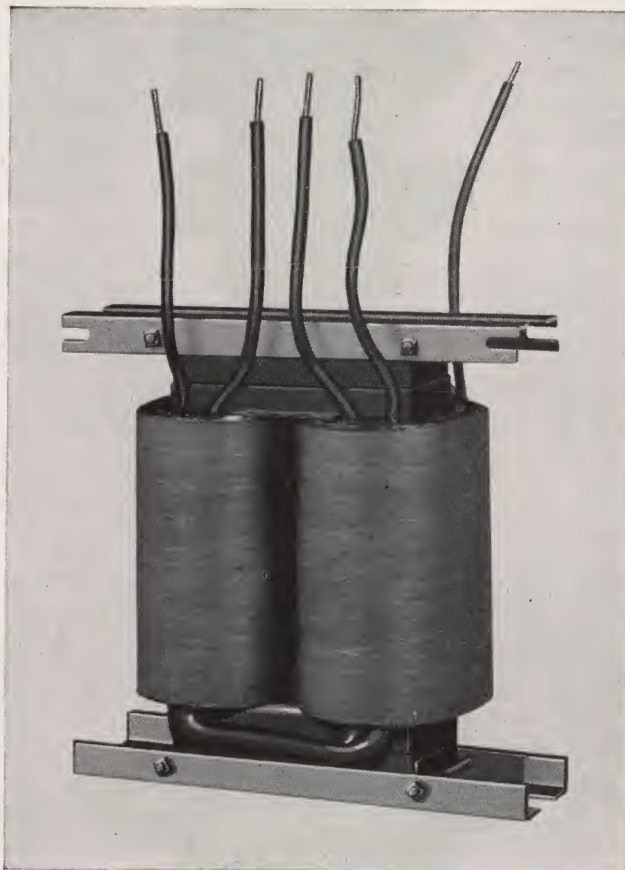
The cover clamps and lifting lugs are combined into single units and are welded firmly to the tank sides, near the top, in a convenient position for handling and adjustment. Two suspension brackets, also welded to the tank, have slots for mounting the transformer directly on the pole by means of two through bolts, without the use of suspension hooks or other extra accessories. The cover is fabricated from the same steel as that used in manufacturing the tank. It is securely held in place by clamps fitted with non-rusting wing nuts. In the cover is a hand hold that enables the transformer to be easily inspected by simply unbolting a lid over an aperture which fully reveals the core and coil structure. An oil proof Neoprene gasket is placed between the tank and cover to prevent oil leakage or evaporation. All transformers are shipped filled

with oil which is refined especially for use in transformers exposed to temperature changes and is free from moisture, acid, alkali, or sulphur compounds.

Insulators and Protective Devices

Type-AR Transformers are equipped with wet process, porcelain primary bushings which are coordinate with the impulse strength of the windings so that in the event of a surge being imposed upon the transformer, the flashover will occur on the exterior surface of the tank, away from the porcelain, and will not rupture the windings.

Three stud type secondary bushings equipped with solderless connectors together with a grounding stud are installed near the top of the tank to facilitate speedy installation.



Typical core and coil structure of Rural Transformers 1 to 25 KVA.

Protection against line surges and short circuits is offered by various devices any of which will be installed as indicated by customer's specifications. Safety gaps, valve arresters, hot tap clamps with fuses, and indicating secondary fuses are available in sizes corresponding to the voltage rating of the transformer. Arresters of this nature have the ability to discharge surges and limit the voltage to a level which provides an adequate margin of safety. All protective devices used on Standard Rural Transformers are thoroughly tested to determine their effectiveness under operating conditions.

Supplementing the line of Type-AR Rural Transformers, we call your attention to our Type-A high efficiency Distribution and Power Transformers which are built for every class of service. For complete information concerning Distribution and Power Transformers write for Bulletin S-401.

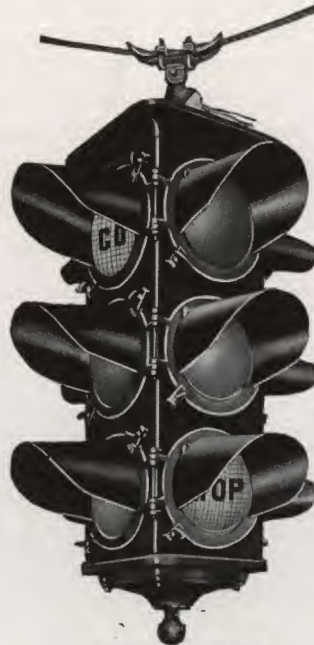
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ESSCO TRAFFIC CONTROL SIGNALS

ESSCO RD SIGNALS make use of colored beams of light as traffic indications. Red indicates **Stop**, Green indicates **Go** and Amber indicates **Caution** or **Change of Traffic**. These signals are of rigid aluminum construction, with hinged doors and full 8-inch rigid aluminum visors.

The glass reflector used is scientifically shaped, having a diameter of eight inches, with pure silver backing protected by an electrolytically deposited coating of copper. It is further protected by sheradized steel-shell which is rust-proof and holds the reflector rigidly in place. The shape of the reflector permits the use of standard sixty-watt traffic lamps or the fifty-watt mill-type lamp. The receptacles, held in place by the steel-shell are so fixed that the proper focal adjustment for the lamps can be made easily.



Type RD-4 Suspended

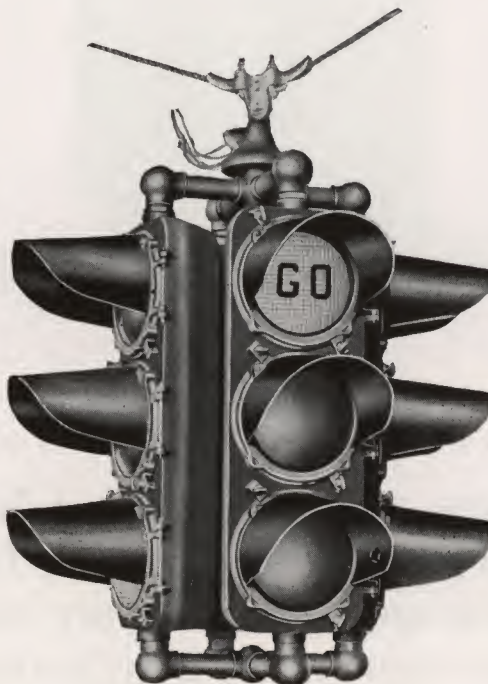
The Type RD-4 Suspended Signal has color indications showing red, green, and amber on each of four sides. The top of the signal is provided with a malleable steel casting which serves as a hanger and is provided with a porcelain fitting for the entrance of wires.

Wires are brought out along the supporting cable and carried into the signal through the porcelain fitting.

The height of the signal is forty-five inches, twenty-nine inches from tip to tip of visors.

Each roundel, eight and three-eighths inches in diameter, is held within its individually hinged door by spring-brass retaining rings and is cushioned by cork gaskets. The door may be swung open merely by releasing two thumbscrews.

Either of the signals illustrated here can be furnished for post mounting if it is desired to mount signal from the roadway rather than suspend it.



Type RD-4 Adjustable Suspended

The Type RD-4 Adjustable Suspended Signal has three color indications showing on each of four sides, each side being independently adjustable as to direction. These signals are especially adapted for use where two streets intersect at other than right angles. Thomas hanger, attached to top casting, is also supplied, to adjust alignment and assure the correct hang of signal. Height of the signal is 45 inches.

ESSCO Traffic Control Signals

The Type RD-2 Adjustable Signals are made up of two housings, each housing containing three color indications. The housings are centrally supported and can be turned in whatever direction desired.

Reflectors and lenses are identical with those described as being used in the Type RD-4 signal, and the same construction is employed with reference to the retaining rings, lenses, HINGED DOORS and visors.

One of the most efficient methods of handling traffic is the use of four three-way adjustable signals for each intersection, mounted at the curb line. When this method is used, the motorist has two color indications showing from the far side of the street—one directly in front, and one to his left—while pedestrians always have color indications directly in front of them.

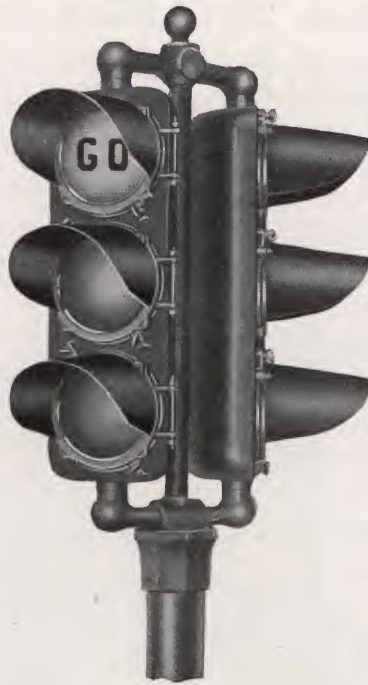
The signals can be mounted on their own posts, seven feet high, or can be fastened to existing posts by brackets.

The Type RD-2 Adjustable Bracket Mounted Signals are constructed the same as those for post mounting, with the exception that a set

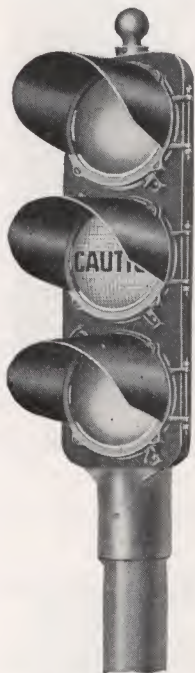
of standard-length brackets are provided, also pole clamps and fittings, in place of the steel post fitter. Height of signal, forty-five inches.

The Type RD-1 Signal is mounted in a vertical position, and has color indications showing red, green, and amber on one side only. The main housing is cast in one piece, the reflectors and lenses, together with hinged doors and tightening thumbscrews, described under the Type RD-4 signals, are used. A steel slip fitter on the base of the signal is adapted for use on a four-inch post and, as four set-screws hold the slip fitter in place, it allows the signal to be adjusted easily to the proper direction.

The Type RDV-1 Bracket Mounted Signal is of the same construction, for mounting on an existing pole or post, but, as noted, is placed in a vertical position, and is to be mounted on the far side of the intersection, about eight feet from the pavement. It is fastened by means of plain pipe brackets, together with suitable size clamps. Brackets twelve inches in length are standard, but any length desired supplied.



Type RD-2
Adjustable Post Mounted



Type RD-1
Post Mounted



Type RDV-1
Bracket Mounted

TRAFFIC SIGNAL CONTROLS

This control embodies features, practical and needful, that are not to be found in any other. Wherever it has been installed, Municipal Officials give praise to its perfect performance and to its unexampled economy of operation. Although it has fewer moving parts than any other Control on the market, it actually does the work of the most expensive types, does it better, and at less operating cost. It needs no attention. Gives no trouble. Even oiling is unnecessary—due to the **graphetized bakelite bearings**.

Simple
Mechanism

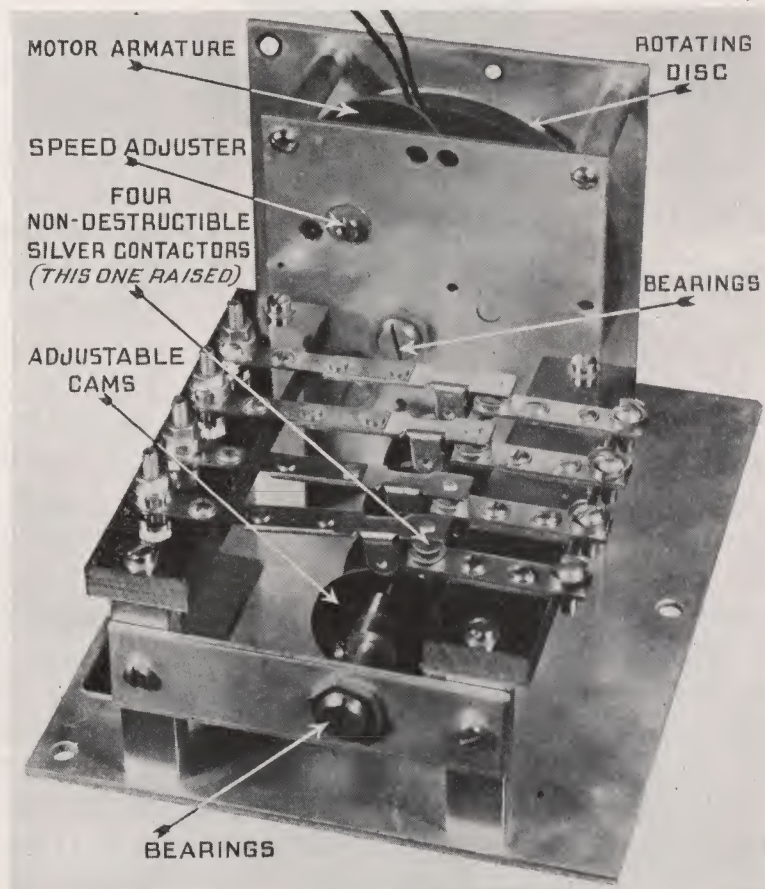
All-Round
Economy

Made For
1-2-3-4-Stage

Perfect
Performance

Moderate
First Cost

Versatile
For Every
Signal Need



Easily
Adjusted

No Repairs
No Maintenance

Ten Cents
A Month
To Operate

All Parts
Accessible

Oiling
Unnecessary

Absolute
Dependability

Equipped with a very small motor (about 1/500 h. p.) this Control **operates the traffic signal for less than ten cents a month.** This compares with one dollar, or more, a month that it costs to operate any other type of control. It will actually carry many times its rated capacity.

It is simple in every respect. Take note of the accessibility of parts, as shown in our illustration. Adjustments are not only simple, they are easy to make.

All cams are adjustable for any desired variation of periods, and the Control can be furnished with as many contacts as may be required—for 1-stage, 2-stage, 3-stage, 4-stage.

The Control can be used in connection with relays. No commutator.

Any number of signals along a street may easily be timed to show all-one-color, or to show alternate colors, at precisely the same second. Or they may be staggered for semi-progressive operation, or set for progressive operation.

This Control can be mounted in the same cabinet from which the old one is removed.

Through-traffic and cross-traffic may be timed as differently as desired.

Expensive underground excavations can, in most instances, be avoided.

Smaller models of this Control are available to be used on inside of signal, or in Flashing Warning-Beacons.

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

ESSCO Traffic Control Cabinet



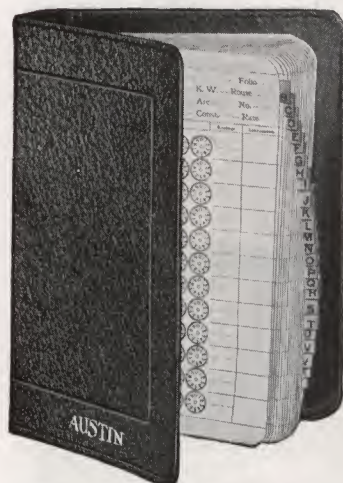
See page 12 for description of our special traffic control.

Weatherproof Cast Iron Traffic Control Cabinet, the interior of which is protected by an aluminum finish, while the exterior is finished with three coats of weather-resisting enamel. The door of this cabinet is mounted on pin hinges, closes against an asbestos gasket, and is furnished with a high-grade spring lock and two keys. Ventilating louvres in the door. If desired, can be furnished with keys identical with those used on most fire-alarm boxes.

Weatherproof wrought-steel cabinets with slide cover also can be furnished.



AUSTIN METER BOOKS, SHEETS, TOOLS

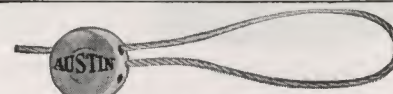
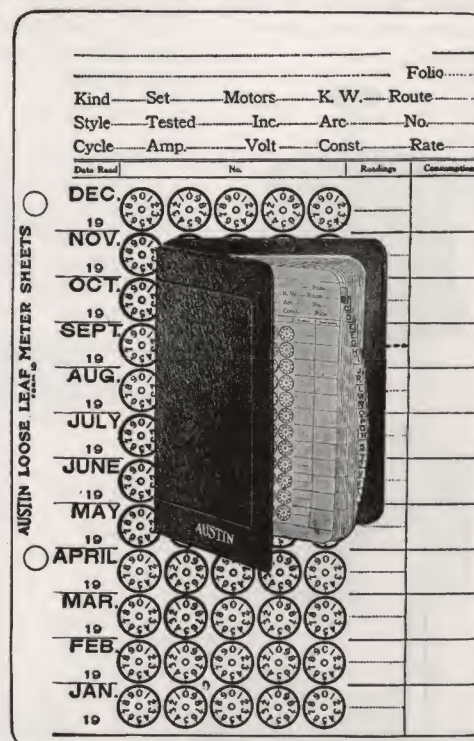


No. 3-C—Pocket Meter Book

AUSTIN Meter Books are equipped with I. P. adjustable nickel-plated binder, which permits the book to be opened flat, at any point, for the removal or insertion of sheets, without disturbing other sheets in any manner. The standard size is cloth-bound, with leather backs and corners, and takes the Austin standard-size sheets, $8\frac{1}{2} \times 5\frac{1}{2}$. The pocket size is made up in flexible leather, and takes sheets measuring $5\frac{1}{2} \times 3\frac{1}{2}$. AUSTIN Meter Seals are made of four strands of No. 30 soft tinned wire, in four lengths, four, six, eight, and ten inches, especially designed for sealing meters. The Meter Sealing Tool shown here weighs 14 ounces and is $6\frac{1}{2}$ inches long, therefore convenient for the pocket, and yet, the especially designed compound lever makes it one of the most practical tools of its kind on the market; it can be furnished, at small extra cost, with engraved letters or numbers, if specified.

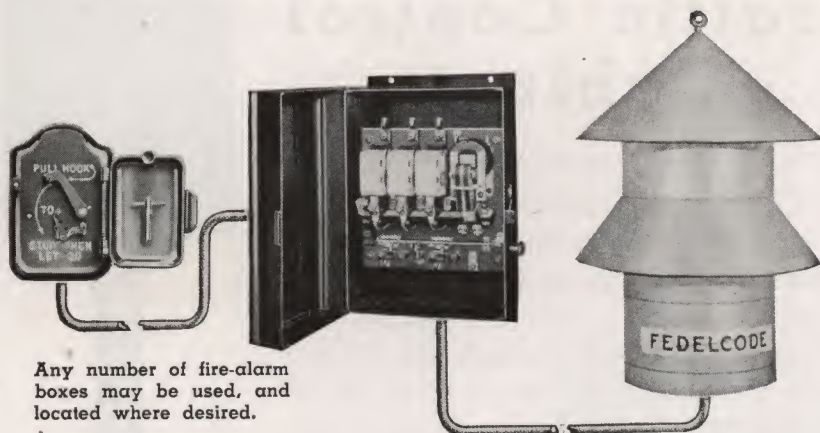


No. 888—Meter Sealing Tool



No. 1224—Meter Seal

FEDERAL FIRE-ALARMS and SIGNALS



Any number of fire-alarm boxes may be used, and located where desired.

A TYPICAL ALARM INSTALLATION

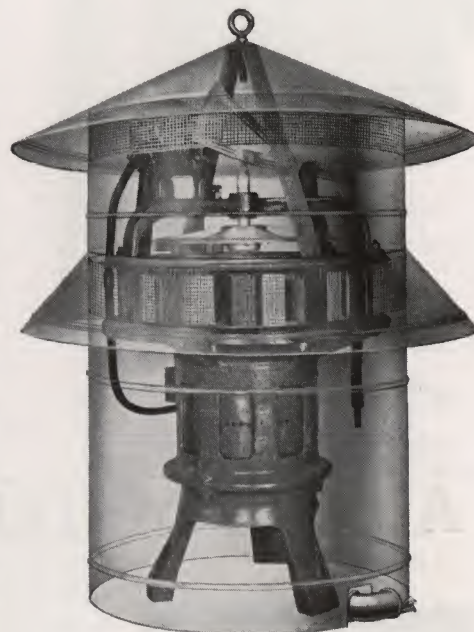
This hook-up of the Federal Siren, Remote Control, and Pull-Lever Control Box illustrates a simple, efficient Fire Alarm System. Pulling the box lever operates the siren up and down the sound scale for one or several minutes, then automatically cuts out. Only two control wires are needed but as many boxes as desired may be used.



Model No. 1, with 1 h. p. vertical type ball-bearing motor. Especially for small communities and large industrial plants.

VERTICAL FIRE ALARM SIREN

The Federal Vertical General Alarm Siren is built to be heard at any distance. Its mechanism is protected at all times by its weatherproof housing. Its rotor is designed for instant pick-up. Construction is rugged, compact, built to last. The motors and grease cups are easily accessible. The finish is in aluminum or Red Duco, as desired. These Sirens are approved by the National Board of Fire Underwriters. They can be mounted on towers, entirely in the open, without covering or protection. A special hoisting bracket makes it a simple matter to raise the Siren to roof of building or top of tower. An exclusive feature is that of converting the General Alarm Siren into a Code Siren that denotes the location of the fire. Widely adopted in municipalities of Louisiana, Mississippi, Alabama, and other Southern States.



A phantom view of Nos. 5 and 7 Federalcode Siren, with coding mechanism.



Signa-Kall

SIGNA-KALL

A thoroughly dependable, widely-used calling device, providing for 30 separate codes, to call 30 different people in your establishment. Each call repeated once, twice, or three times. Can be used on any signal system, and gives instant call for superintendents, foremen, operators, managers, executives, etc.

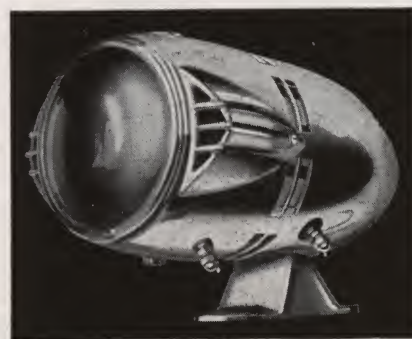
For Bells, Chimes, Horns, or Sirens

TYPE "A" SIREN

Designed for factories, industrial plants, mines, warehouses, cranes, and other places where sharp, clear signals must be had. Can be used for **Danger**, **Start** and **Stop**, or **Call** signals. Takes the place of bells, gongs, whistles. No gears or vibrating parts. Its powerful tone penetrates all industrial noises. Illustration shows this Siren with weatherproof housing. Universal-G.E. motor, for AC or DC, any phase or cycle.



Type "A" Siren



TRAFFIC MASTER, MODEL "W"

Its flooding pathway of flashing light, green or red, and its Siren roar make it heard for hundreds of yards ahead—ideal and indispensable appurtenance for **FIRE**, for **POLICE**, and for **EMERGENCY**.

PORCELAIN INSULATORS, KNOBS, TUBES



Spring Clip



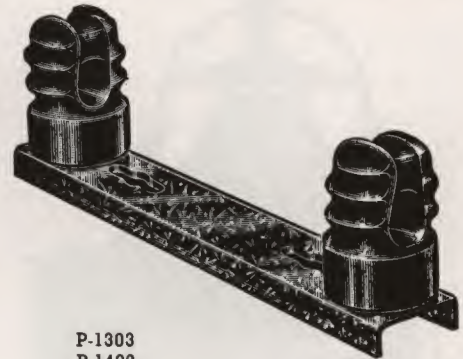
Coilspring



Ferrule



$\frac{3}{8}$ and $\frac{1}{2}$
Pipe Thread



P-1303
P-1403



No. 1
Nail-It

A Word or Two About Electrical Porcelain

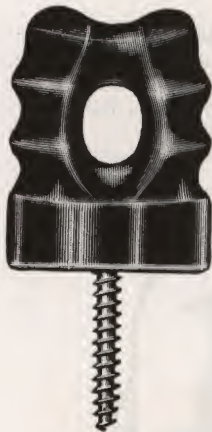
Electrical Porcelain is either good or it is bad. When bad it is not vitrified, it is porous, and it will absorb moisture and be a conductor rather than an insulator. This is whether it be glazed or unglazed, as in firing there must be an unglazed surface, and "no chain is stronger than its weakest link."

When it is good it is vitrified, non-porous, and will not absorb moisture, whether it be glazed or unglazed.

When glazed, a smooth surface is produced from which foreign substance can easily be removed, and which makes it difficult indeed for any foreign substance to adhere and thus become a conductor.

When unglazed, the surface is rough, and, while vitreous, foreign substances easily adhere and may become conductors.

Our knobs and cleats are made of dry-process mixture, and pressed into shape; tubes of wet-process mixture, extruded, and head shaped on.



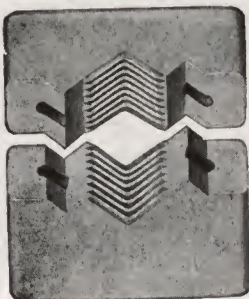
P-412

We Are Always Very Particular About the Quality of Porcelain We Sell

Porcelain Fuse Plugs
Porcelain Radio Insulators
Porcelain Knobs, Tubes, Cleats
Porcelain Insulators, Wet and Dry Process
Cast Process Porcelain
Refractory Heater and Resistance Porcelain
Loctite, Ferrule, Galvanized Locknut and
Spring-Clip Type Box Bushings
Porcelain House Service Knobs and
House Brackets
Service Caps
Neon Sign Fittings



Solderless Connector
10016 and 10017



B. & D. Cleat

HOUSE BRACKETS

2 Spool 9" Spacing

3 Spool 7" Spacing

Porcelain Brown
Glaze

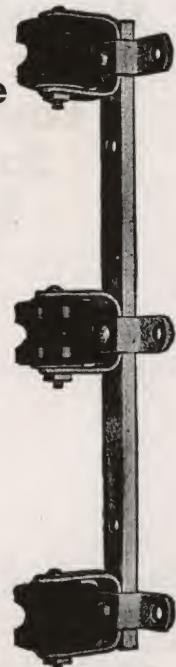
Packed 25 to Carton

Length 2 Spool
10½ in.

Length 3 Spool
16 in.

Weight 2 Spool
1.7 lb.

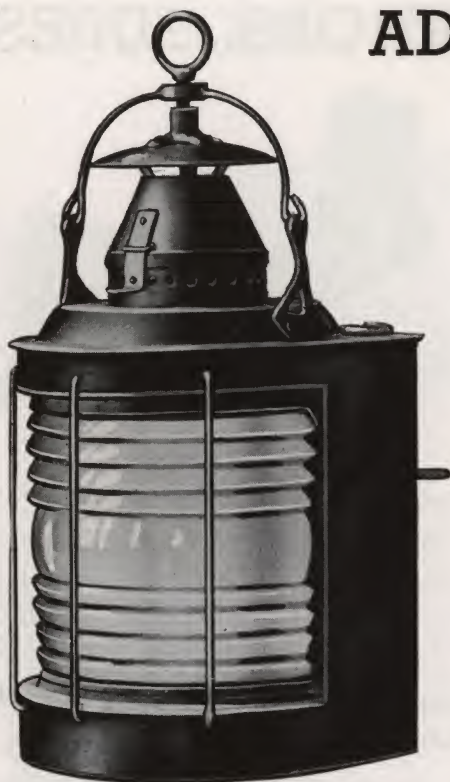
Weight 3 Spool
2.7 lb.



Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

ADLAKE OIL BRIDGE LAMPS



No. 197, Pier or Abutment Lamp
Fitted with 8-inch, 180° pressed Fresnel lens, either white, green, or ruby. With ruby Fresnel, this is the lamp referred to in Par. 7 of the U. S. specifications.

Adlake Lamps for lighting bridges over navigable waters, and for lights on sheer-booms, piers, dams, and other obstructions to navigation, are made strictly in accordance with the specifications of the United States Lighthouse Service, Department of Commerce and other Government Departments. They are weather-proof, rust-proof, and all oil-type units are ventilated with ADLAKE **Non-Sweating Balanced-Draft** system, to prevent any sweating of the lens whereby signals might be obscured. Vents are thoroughly screened against insects. Oil-burning lamps are made of heavy steel throughout, but can be of brass when specified. Oil-type can be furnished with tanks of capacity for 200 hours burning.

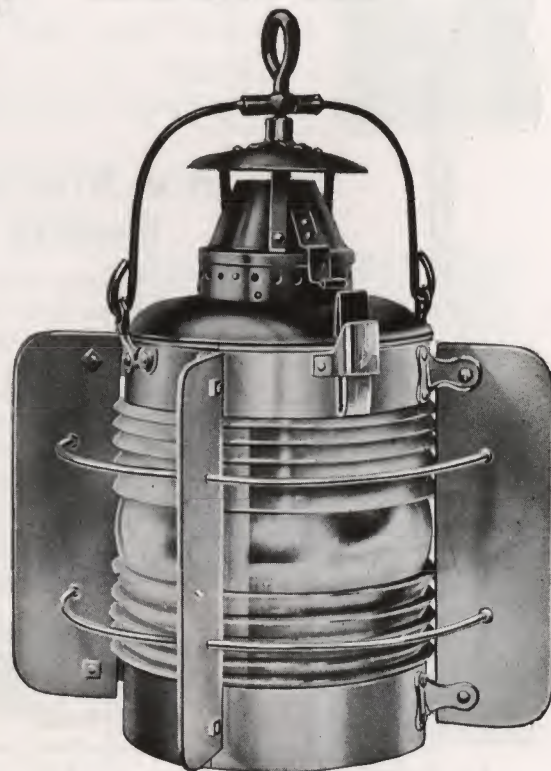
Within the past two years CHURCHILL has furnished the important share of the lighting equipment on the following bridge installations:

Huey P. Long Mississippi River Bridge*
West Pearl River Bridge*
Hog Island Canal Bridge*
Krotz Springs Bridge†
East Pearl River Bridge†
Santa Rosa Sound Bridge*
Harvey Canal Bridge*
High Island Bridge*
Bayou Bienvenue Bridge†
Morgan City Bridge†
Rome's-Ferry Bridge†
Madisonville Bridge†
Mandeville Bridge*
Columbia Bridge*
Slidell Bridge*
and Others

* Electric. † Oil.

No. 347, Drawbridge Lamp

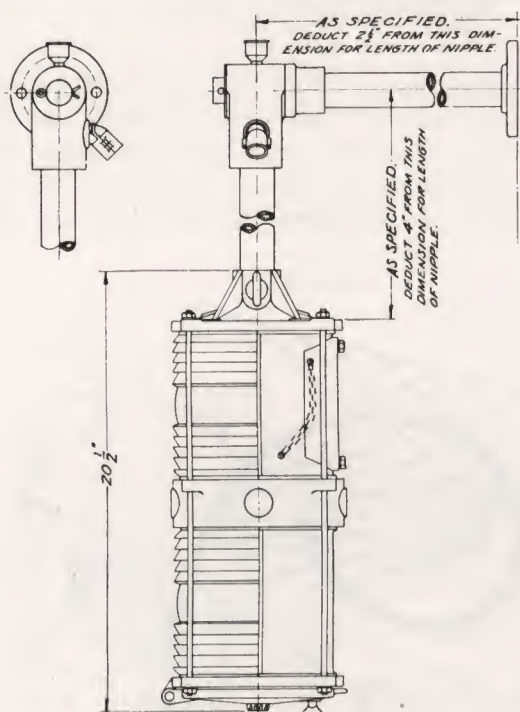
Instead of having colored lenses, colored disks are located inside the Fresnel. With this arrangement each light indication has a 90° spread.



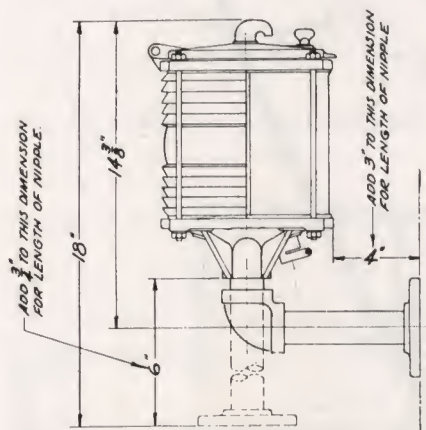
Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

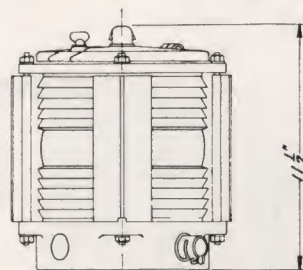
ADLAKE ELECTRIC BRIDGE LAMPS



No. 1331—Duplex Lift-Bridge Lamp.
Colors, Degrees and Dimensions as Specified.
180° Fresnels as Shown—Red, Green or Clear.



No. 1334—Pier Lamp.
Color, Degrees and Mountings as Specified.
180° Fresnel as Shown—Red, Green or Clear
Also Furnished With 360° Fresnel



No. 1335—Draw Span Light.
4 90° Fresnels, Alternate Red and Green.
4 ⁷/₁₆ Rd. Holes, 5" Ctrs., in Base for Mounting.

Adlake Electric Bridge Lamps, of which three types are shown in these diagrams, are made of cast aluminum or brass, are weather-proof, rust-proof, and conform to Lighthouse Service regulations, all ventilated to prevent sweating of the lens, and vents covered with protective screens.

So far as possible, lamps with the following standards should be used: Aluminum lamp body castings, gray iron pivot with bronze pivot pin, and standard 1 1/4-inch iron pipe and pipe fittings. All sockets are focused for 60 or 100 watt bulbs, as specified.

We can furnish special brass castings, and also standard 2-inch pipe and fittings. With brass lamps all minor parts will be of brass so far as practicable. Aluminum or brass pipe can be used instead of iron.

These lamps are made of interchangeable parts, and many combinations in assembly can be made. We can meet any special requirements.

Pivot mountings are especially suited to lift any high-span bridges. The lamp hangs so as to be visible beneath the bridge, and, by means of a chain attached to the ring in the upper casting, can be raised to the upper level of the bridge for changing bulbs.

**All Lamps Manufactured and Assembled in Accordance with Regulations of
the United States Department of Commerce
Lighthouse Service**

ALL LAMPS ARE VENTILATED

**Any Special Requirements for Unusual Uses or Conditions Can Be Met by
Combinations of the Interchangeable Parts for
Various Assemblies**

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

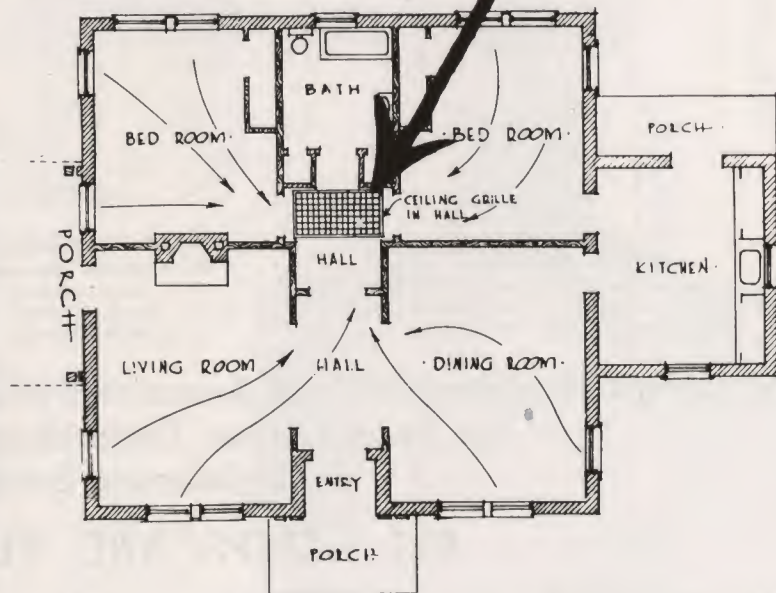
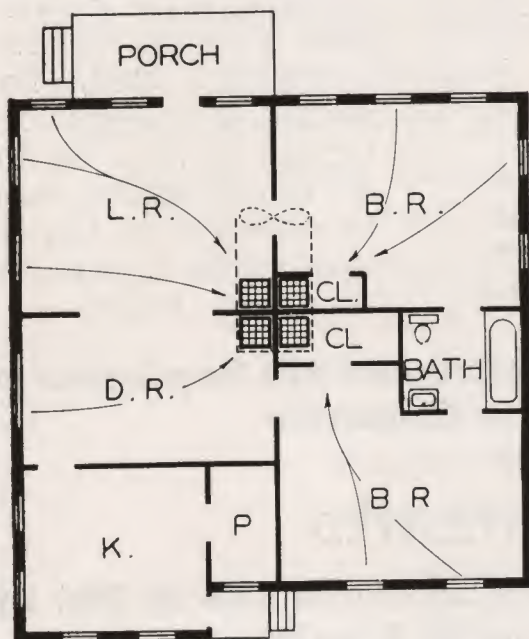
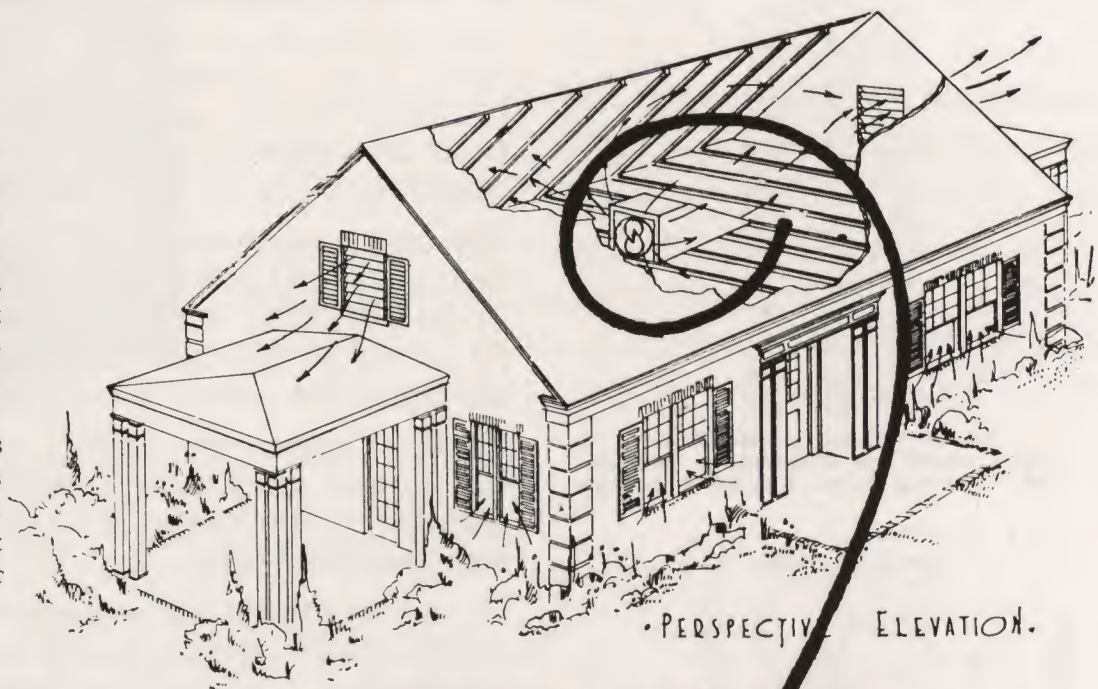
C. ROBERT CHURCHILL, New Orleans

ATTIC VENTILATION

THE TIME to make ready for hot weather is before the next hot weather sets in. Attic Ventilation conditions the home for a comfortable summer, and does it in a **natural** manner, and with the most moderate investment. This new system brings in a gentle breeze from out of doors, and makes your work and sleep refreshing. The Attic, otherwise a huge reservoir of heat, becomes the good angel of every room in the house. First cost is low, installation low, operation extremely low. Noiseless. No vibration. Simply plug into receptacle, and the Ventilator goes to work.

Plans Shown

At right we see an Attic Ventilating Fan drawing the outside air through a centrally located grill, and forcing it out through the attic openings. Where there is no central hall, small grills may be located as in the plan below, the suction box placed to cover them all.



• FLOOR PLAN •

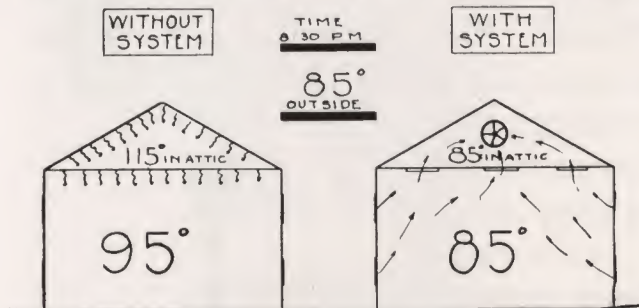
Cuts Used Thru the Courtesy of New Orleans Public Service Inc.

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request
C. ROBERT CHURCHILL, New Orleans

ATTIC VENTILATION

THE DIFFERENCE

The plan here given illustrates what happens when the outdoor temperature and the broiling sun combine to



create a heat reservoir in the attic, making it hotter in the house than out-of-doors. Then, with the ventilating system, how the super-heated atmosphere gives place to the **natural** temperature, plus the cooling effects of a steady breeze.

OUTSTANDING FEATURES

All ventilators powered with G-E motors.

Cast aluminum-copper alloy blades that will not break, bend or lose their curvature.

Ball-bearing propeller-shaft packed in grease. Bearings in steel tube. Demountable from frame.

"Built-in" fire-protection system.

Thermal overload protection on motor.

Rugged-welded steel-tube framing.

Simple construction, integral parts demountable.

3-point suspension, floating rubber mountings.

Slow-speed for the lower air velocities.

Quiet operation, by low velocities, rubber insulated frame, and sound-absorbing cradle.

Shipping-crate used to form suction-box, a material saving on installation cost.

Recommended and approved by Fire Prevention Bureaus.

Tested and rated by the American Society of Heating & Ventilating Engineers.

Large and small models to fit any ventilation requirement.

Cuts Used Thru the Courtesy of New Orleans Public Service Inc.

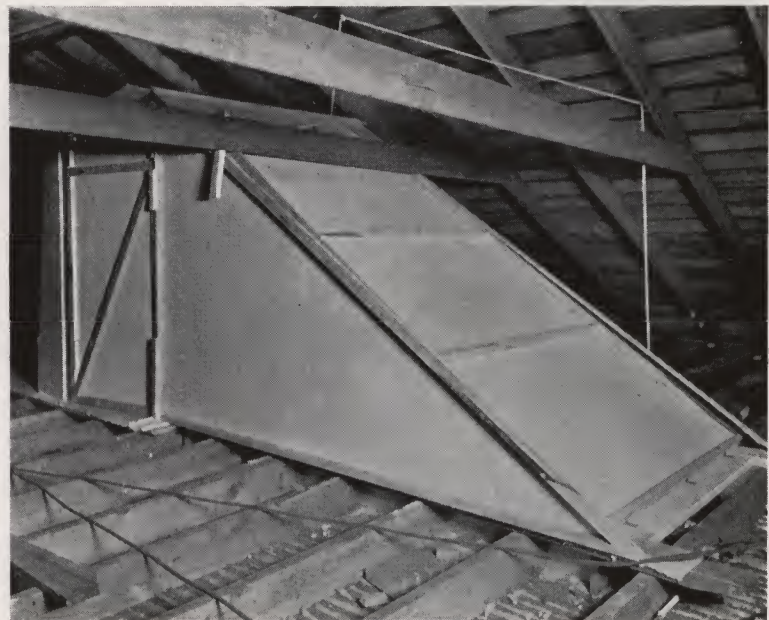
AIR REQUIREMENTS

The capacity of the fan should be sufficient to give at least one complete air change per minute in a one-story house. In two-story houses there should be a complete change of air every 1½ minutes.

This is considerably higher than the rate of air change recommended by some engineers and manufacturers; however, experience here in this territory proved the larger capacity to be essential. One reason for recommending the use of fans of the larger capacity is to create an air motion of sufficient velocity to reduce the effective temperature during the daytime and early evening hours.

ELECTRICAL INSTRUCTIONS

The fan motor must be connected to a circuit of sufficient size to carry the added load. When an existing circuit is not available, the motor should be placed on a separate circuit—of at least No. 12 wire. The switch should be centrally and conveniently located. In a two-story house, a 3-point switch should be used so the fan may be controlled from either floor. Whenever possible the fan motor should preferably be connected to a 220-volt supply.



Side view, showing top of suction-box in operation
Inspection door at left.

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

CIRCULATOR AND EXHAUST FANS

QUIETNESS

Quietness in aerotype ventilation is a first consideration and is secured by the method of rubber flotation, and by the latest scientific design of blades. Slow speed of our circulators assures long life and adds to quietness of operation. Motors of the latest improved design have been developed for fan service, with slow starting, and exceedingly low current consumption. Two-speed models available. Beautifully finished.

All circulators come completely assembled, ready for installation.



Guaranteed
Against Electrical or
Mechanical Defects

Attic Ventilators



Suitable size ventilators available for any ventilation demands.

Single speed and two speed direct drive Exhaust Fans available in various speeds and diameters.

Direct Drive Exhaust Fans



Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

RUSCO STUDENT PATROL BELTS



A28—Single 1-Inch Shoulder Strap

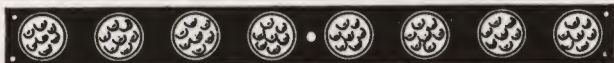
The brilliant whiteness of the RUSCO Student Patrol Belts ensures better visibility and therefore better protection. The sturdy RUSCO **web** from which the belts are made is easy to wash, and gives years of service and keeps in shape.

Made in single or double, one-inch or two-inch, shoulder straps, in sizes for boys and men. Straps and belts both adjustable to the individual's size—all of lasting **web**, but in grades and weights to fit your budget.

RUSCO are pioneer builders of **web** belts, and their years of experience have developed the best that can be offered in quality, durability, style, and tailoring, offered at popular prices.

Also Traffic Policemen's Belts

Safety The Modern, Flexible, Economical Reflective Units! **REFLECTOSTRIP**



THE ECONOMICAL AND EFFICIENT WARNING

All you need to use REFLECTOSTRIP is a hack saw, and a screwdriver. These reflecting units (8 to each foot) come in standard five-foot lengths of 16 gauge Parkerized Rust-Resisting Steel, 1 1/2 inches in width, which can be easily cut to fit any requirement. The steel strips, or backgrounds, are finished in a satiny black. Five holes are provided to every foot, and 20 3/4" Parkerized Rust-Resisting, non-removable Screws are furnished with every five-foot length.

EIGHT COLORS AVAILABLE

Standard Colors Are Red, Crystal, Amber and Green

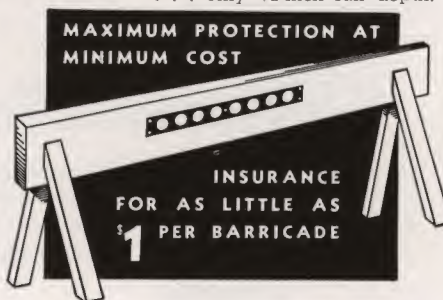
EIGHT UNITS TO THE FOOT

Each unit with an optical diameter of 7/8" is an auto-collimating reflector having the property of reflecting light in the direction of incidence, whatever that direction is relatively to the source. Each unit is made of seven clustered lenses. Lenses are set 1 1/2" from center to center and at a distance appear as a continuous line of light.

WARNING FOR 1200 FEET
In a recent test, one of the largest railroads in this country found that a twelve-inch letter made of REFLECTOSTRIP units could be read over 1200 feet, and seen much farther. Remember too, REFLECTOSTRIP gives you perfect reflection up to an angle 50 degrees from each side of center. A headlight beam does NOT have to be focused directly on the sign to illuminate the warning.

FOOLPROOF—WEATHERPROOF

The reflecting units cannot be unscrewed unbolted or stolen from the strip itself. Bronze button retainers seal the lens in place. REFLECTOSTRIP is the thinnest assembled reflective unit made . . . only 1/2-inch full depth.



COSTS LESS

Compare the cost of REFLECTOSTRIP with any other type of reflector of the same brilliance. REFLECTOSTRIP costs less to purchase, costs less to install and NEEDS NO MAINTENANCE.

USES FOR REFLECTOSTRIP

Bridge Approach Warnings, Road Guard-Rails, Width Indicators on Roads and Busses, Obstruction Markers of All Kinds, One-Way Arrows and Sign Borders, Dead-End Barriers, Speed Indicators, Hand Signals, Ladder Markers, etc.



Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

Steel City Electrical Specialties

Outlet Boxes and Covers. Switch Boxes. Gang Boxes. Bar Hangers. Set-up Boxes. Concrete Boxes. Utility Boxes and Covers. Partition Boxes and Partition Covers. Kruse Supports. Connectors. Entrance Caps. Entrance Ells. Locknuts. Bushings. Nipples. Adapters. Extensions. Couplings. Pipe Straps. Staples. Hangers. Studs. Grounding Devices. Cast Iron Boxes. Floor Boxes and Accessories. Insulator Supports. Telephone Ells and Tees. Allen Benders. Wrenches. Fish Wire and Pullers. Expansion Bolts. Ovalduct and Fittings. Marchand Clamps. New and Old Type Campbell Receptacles and Plugs.

Star Sectional Switch Boxes. accommodate all standard flush switches and receptacle. Removable sides. No obstructing partitions. Star LC for non-metallic flexible tubing (loom), with 2 loom clamps.

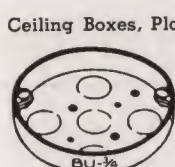


Star LC



No. 54151

Octagon Boxes, Covers and Extension Rings. No. 54151, four-inch box, 1/2-in. knockouts; 4-in. sides and 5-in. bottom.



No. 56121

Ceiling Boxes, Plates, Covers. Comply with code requirements for all classes of wiring. Pressed-steel—electro-galvanized, sherardized, or black enameled. No. 56121, round ceiling box, five 1/2-in. or 3/4-in. knockouts with lugs.



No. 477

Non-Adjustable Floor Outlets. No. 477, original Fullman-type outlet. Cut shows receptacle mounted on steel ring.



No. 494 Service X-IT

No. 494 Service X-IT with 10-amp., 115-volt bakelite receptacle and straight connector for 3/8-in. armored cable.

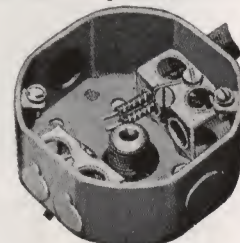
Bar Hangers. Straight, Old Work, Cleat, Deep Offset, Shallow Offset. No. 6002, deep offset, 18-in. bar, 9-in. offset, 2-in. deep.



No. 6002—Deep Offset

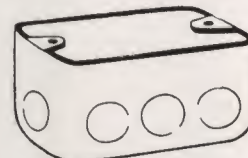
Combination Boxes and Assemblies. Boxes of pressed-steel—electro-galvanized, sherardized, or black enameled. No. 36151-XSC, round box, two 3/8-in. K. O. in each of two opposite sides; four 3/8-in. pri-outs and one 1/2-in. K. O. in bottom; mounting ears and 2 clamps, fixture stud and grounding screw in each clamp.

Boxes of pressed-steel—

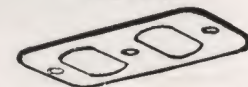


No. 24151-XSC

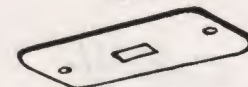
Utility Boxes and Covers. No. 58361, Utility Outlet Box, stamped steel. No. 58-C-7, Duplex Receptacle Cover. No. 58-C-30, Toggle Switch Cover. Holes in ears 3 9/32 in. on centers; holes in bottom for fixture studs or nails. Knockouts; three 1/2-in. in each side, one 1/2-in. in each end. Three 1/2-in. in bottom. The following knockouts can be furnished; two 3/4-in. in each side and bottom, and one 3/4-in. in each end.



No. 58361



58-C-7



58-C-30

Entrance Caps, Ells, End Fittings, Capped Elbows. No. 260 entrance cap, to protect wires and cables, 4 holes in insert. All cadmium plated, electro-galvanized, or sherardized malleable iron parts with removable composition insulator to assure full protection at all times.



No. 260

All standard square switch boxes, and round and hexagonal outlet boxes can be furnished now in **Bakelite**; and have full approval of Fire Prevention Bureaus, to use with CNX and Romex types non-metallic sheathed cable.

EVERDUR

All Steel City fittings can be furnished in everlasting **EVERDUR** metal for use in places where acid or alkaline fumes are usually present.

Combination Boxes, Barsets, Bar Hangers. Save time and labor. No. 36151-XSB. Bar-Set Box on shallow offset hanger 19 1/2 in. long. Any combination may be had.



No. 36151-XSB

STEEL CITY ELECTRICAL SPECIALTIES

This line is very complete, of the highest quality and latest designs, of thoroughly modern manufacture, good appearance, and wonderful performance. It has been a leader, and of the most enviable reputation, for the past thirty-five years. Nothing better can be bought. All of these products are carefully inspected by the manufacturers and by the Underwriters Laboratories, Inc. The Steel City guarantee covers replacement of any goods that prove defective.



No. 191

Straps and Staples. No. 191, Light Duty heavyweight pipe strap. These in all standard sizes, of high-grade malleable iron, cadmium plated, electro-galvanized, or sherardized. Very strong. Built to prevent sagging conduits.



No. 760

One-Point Bracket. No. 760. The insulator floats on the eye. Accommodates the line, regardless of the angle. Can carry wires on wall surface.



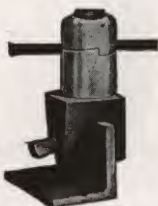
Nos. 100-113

Bushings, Nipples, Closers. Nos. 100-113, Star Bushings. Malleable iron, rustproof, rib design. Easy turning in crowded places.



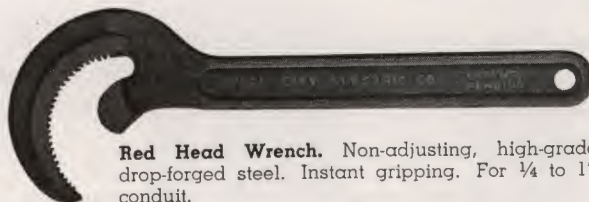
Nos. 300-306

Locknuts. Nos. 300-306, $\frac{3}{8}$ to 2" steel, notched type. Sizes $2\frac{1}{2}$ to 8" of malleable iron cast in "rig" design. May be driven with a screw-driver where wrench or pliers will not reach. Also brass and over-size locknuts.



No. 501

Insulator Supports and Accessories. No. 501 Support with No. 33 sectional insulators.



Red Head Wrench. Non-adjusting, high-grade drop-forged steel. Instant gripping. For $\frac{1}{4}$ to 1" conduit.

Allen Light Wall Conduit Benders. Nos. 4 and 5, improved bender, tapped $\frac{3}{4}$ or 1" male. No. 3, combination for thin wall conduit, but will take $\frac{1}{2}$ " heavy wall conduit.

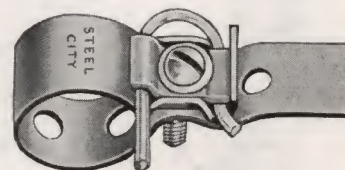


No. 4 and 5 Type



No. 3 Type

Red Head Fish Wire Puller. Lever principle. Guard holds wire in place. Not necessary to remove wire to secure new grip.



No. 351

Ground Straps. S. L. Type—Heavy. For use with or without solder. No. 351, $\frac{3}{8}$ " to 2". (Other numbers to 4".)



Nos. 401 and 421

Adjustable Floor Outlets. Original Fullman Type. Nos. 401 and 421, complete outlet, consisting of No. 402 standard box body, No. 405 standard combination adjusting ring and bronze flange ring, cover plate with 2" plug, cork or rubber gasket, steel plate as seal for 2" plug.

WIRING



DEVICES



BAKELITE KEY SOCKET
250 Watts—250 Volts



BRASS KEY SOCKET
250 Watts—250 Volts



ROTARY CANOPY SWITCH
Black or Brown Bakelite
3 Amperes—125 Volts
1 Ampere—250 Volts



BAKELITE PULLCHAIN EXTENSION SOCKET
250 Watts—250 Volts



PORCELAIN OUTLET BOX RECEPTACLE
250 Watts—250 Volts



PORCELAIN PULL SOCKET
250 Watts—250 Volts

This exceptional line of wiring devices embraces practically everything in that category, every variation, every modern improvement in materials and adaptations—all of skilled workmanship, all thoroughly tested and inspected.

Whatever you want in wiring devices, we can supply. The illustrations here of random common articles can only suggest the extremely wide variety from which you may select if you ask for bulletins and price lists. You are reminded that Brushed Brass, Polished Nickel and most any standard finishes are stocked at the factory, and are carried in stock by our jobbers. Just a few of the most popular items are summarized, as follows:

Bakelite Shell Sockets. A quality product for industrial lighting—screw-ring cap—the only positive lock. Key sockets, keyless sockets, pull-chain, and push-thru. Made of Brown Bakelite, with pendant cap, $\frac{1}{8}$ and $\frac{3}{8}$ -inch caps.

Brass Shell Sockets. The usual run, for every requirement. Multilock caps. Standard and Electrolux sizes. Key socket, keyless, pull-chain, push-thru, turn-knob—swivel, pendant, and side-outlet caps.

Canopy Switches. Rotary, push, toggle, pendant, feed-thru and pull. Of bakelite or metal. Capacities and sizes to fit all purposes and requirements.

Bakelite Current Taps. Pull-chain extension sockets. Pull-chain current taps. Triple current taps. Offset current taps. Twin sockets. Three-way cube taps. Convenient outlets. Three-way table taps.

Porcelain Pull Receptacles and Outlet Box Receptacles. In sizes and designs to meet every requirement or condition.

Porcelain Rosettes. Two-piece and one-piece fuseless rosettes and outlet-box rosettes. Dimensions to suit any need.

Porcelain Sockets. Key sockets, keyless, and pull. Bodies and caps in all required styles and sizes.

Weatherproof Sockets. In Bakelite, aluminum, or porcelain. With shadeholder groove or bead. The Bakelite and porcelain sockets furnished with 6 inches of 14 stranded rubber covered wire. Devices growing in popular demand, and now a leading seller.



PILOT LIGHT AND RECEPTACLE
15 Amperes—125 Volts



SINGLE POLE SWITCH AND RECEPTACLE
Separate Feeds



PILOT LIGHT AND SINGLE POLE SWITCH
10 Amperes—125 Volts



FLUSH TOGGLE SWITCH
Pony Type



BAKELITE TWIN SOCKET
660 Watts—250 Volts



ALUMINUM WEATHER-PROOF SOCKET
660 Watts—600 Volts

"CIRCLE F" WIRING DEVICES



VAPORPROOF
RECEPTACLE
Conduit Type



PORCELAIN TWO-PIECE
FUSELESS ROSETTE
660 Watts—250 Volts



BAKELITE WEATHER-
PROOF SOCKET
660 Watts—250 Volts

Vapor Proof Receptacles. Pendant type, conduit type, outlet box type, for 25 to 150 Watt lamps. All component parts available, and also wire guards for protection in handling or against accidental blows. Devices especially adapted for exits, warehouses, barns, boats, distilleries, chemical plants, and elevators.

Bakelite Wall Plates. Ribbed design, decorative border. For toggle, push-button, receptacle, and combination installations. Also plates in brushed brass or chromium finish.

Attachment Plug Caps and Bases, and Heater Plugs. In the usual forms, and desired finishes.

Enclosed Fuse Cutouts. Single, double, and triple pole, for main line, single and double branch.

Edison Plug Cutouts. 30 amperes, 125 volts. Triple and double pole, for main line, single and double branch.

Entrance and Battery Switches. Single, double, triple pole, for main line, single or double throw.

Porcelain Screw-Ring Sign Receptacles. Medium and intermediate base.

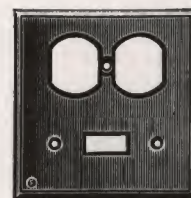
These and many other common and unusual devices are furnished under the CIRCLE-F guarantee.



VAPORPROOF
RECEPTACLE
Pendant Type



PORCELAIN PULL
RECEPTACLE
250 Watts—250 Volts



COMBINATION TOGGLE
AND DUPLEX
RECEPTACLE PLATE

Ever - Ready Sockets

QUICK--SAFE--SURE

Indoor and Outdoor Illumination

Applied to wire with-
out stripping insula-
tion, without solder
or tape

NO TOOLS NEEDED

These sockets of black Bakelite base, red or green cap, are the most convenient, quickest, safest device for making up illuminating display sets for outdoor or indoor uses; attachable and detachable at pleasure, they offer a maximum variety of design. Make up your own sets, or get them from us in streamer lengths as required, **standard base** for No. 10 or No. 12 or No. 14 stranded wire, and **intermediate base** for No. 14 or No. 16 or No. 18.

They are applied direct to the stranded wire (which does not have to be stripped). The wire is placed in the two grooves, the cap screwed down tightly, and the two strong pins pierce the insulation to make positive contact with the conductor. The design of the sockets is such that moisture is absolutely excluded, so that they are weather-proof under any and all conditions. Made in two sizes: Standard Base and Intermediate Base. Supporting hooks for attaching to messenger wire (as illustrated) are furnished at no extra cost.



Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

"American" Industrial and Service Meter Switches

"American" Products embody simplicity of design, ruggedness of construction, high quality materials, to meet the most exacting requirements of each application.



At left we present the new cover design of the "American" Electric Switches—modern, graceful, agreeable to the eye, and springing promptly into favor.

FUSE CABINETS

CURRENT TRANSFORMER CABINETS

RANGE UNITS

INDUSTRIAL AND GENERAL PURPOSE SWITCHES

MANUAL MOTOR STARTERS

METER TEST BLOCKS

METER SERVICE SWITCHES

SERVICE ENTRANCE EQUIPMENT WITH OR WITHOUT DEAD FRONT SHIELD

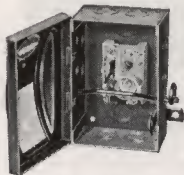
SPECIAL CABINETS

WEATHERPROOF METER DEVICES

TROUGHS

WEATHERPROOF SWITCHES

STANDARD END WALLS & FITTINGS



No. 1111

Three Industrial Service Switches in the new cover design.

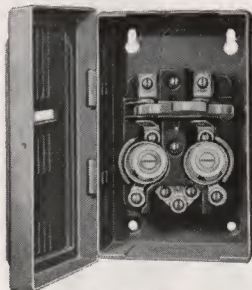


No. 1211

The same sturdy installations, now attractive to the eye.



No. 62322



No. 8111

CLIPPER SWITCHES

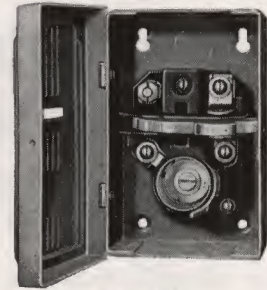
For entrance work or controlling heavy duty lighting and small motor circuits. Two numbers with dead front shield.



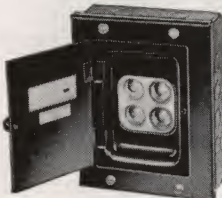
No. 8221

CLIPPER SWITCHES

Modern streamlined design, facilities for locking and sealing handle and cover. Gray enamel, porcelain bases, bakelite handle.

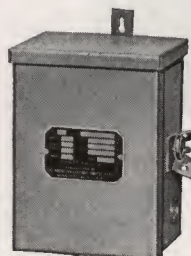


No. 8311



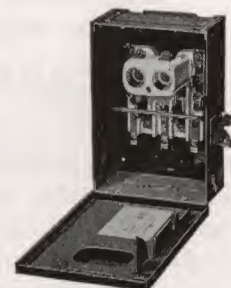
No. 604

Left, Fuse cabinet for surface mounting. Right, Type D weatherproof switch.



No. 2311-OD

Meter Service Switches, accessible main fuses, meter testing or non-testing.



No. 7311

Our Comparative Catalog Numbers Sheets Will Show You Our Number Corresponding to Switches of Other Manufacturers. A Copy on Request.

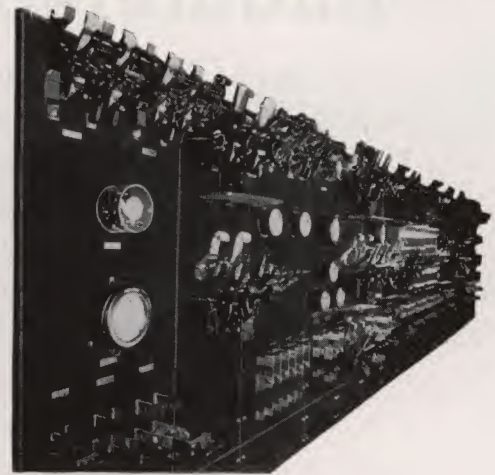
Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

PANELBOARDS and SWITCHBOARDS



The complete flexibility of the American panel and switchboard department permits the manufacture of switchboards to the exact specifications of the buyer.



Distribution Centers

A complete line of distribution centers, both live front and dead front types, for all standard wiring systems. Panelboards built to specifications.

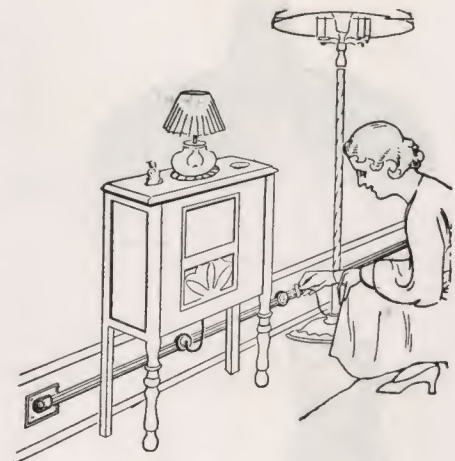
Lighting Panels

Both dead and live front panelboards for lighting services, for plug or cartridge fuses, with or without switched or fused mains, for all standard or special systems.

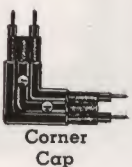
ELECTROTRIM

NEW ELECTRIC WIRING FOR HOME AND SHOP

This neat, modern installation is an ornament and a convenience that everyone can afford. Approved by the underwriters it may be installed **on the surface** of walls and baseboards. It gives you as many outlets as you want, lies flat and inconspicuous on the surface, and comes in colors to harmonize with the background—white, ivory, mahogany, and oak. Easy to install, with outlets wherever you want them, it is **heat-proof, moisture-proof, flame-proof**. The most inexpensive **SAFE** wiring in which you can invest.



Outlets Exactly Where They're Wanted



Corner Cap



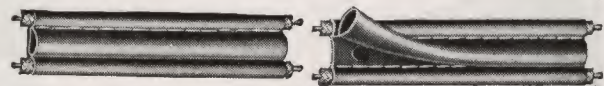
Attachment Plug



Feed Through Outlet



End Outlet



Sold in 50, 100, 200, and 400 Foot Rolls

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

Oamco Synthetic and Porcelain Enameled Metal Reflectors

This extensive line of standard and special industrial and commercial lighting reflectors, with an established reputation that calls for no comment, can be but briefly illustrated here by reference to a few of the most used, out of the hundreds of approved and service-tested appliances that it includes. We can supply reflectors of every type for every purpose, in the best standard finishes, and for all varieties of purpose. Use the suggestions on these pages, and let us know your needs.

Synthetic Enameled Metal Reflectors

Are finished green outside, reflecting surface white. The enamel will not discolor, and is durable. All types of Reflectors, for every purpose.



No. 659A. Flat cone, threaded holder attached for brass threaded shell sockets. Diameters, 10, 12, and 14 inches.



No. 547A. Deep cone for standard 2 1/4-inch shade holder. Diameters, 8, 10, and 12 inches.



No. 958. Half Reflector, threaded holder attached. Green lacquer outside, aluminum bronze inside.

Porcelain Enameled Steel Reflectors

Are green outside, reflecting surface white. For general illumination, indoors and out. A complete line for all purposes.



No. 1093. Special Dome. Lamp-size 50-60, 75-100, 150, 200 watts. Diameters, 12, 14, and 16 inches.



No. 1092. Special Dome. Lamp-size 75-100, 150-200 Watts. Diameters, 12, 14, and 16 inches.



No. 1149. Shallow Dome. Lamp-size 50-60, 75-100, 150, 200. Diameters, 10, 12, 14, 16 inches.



No. 1138

No. 1138. For sign or angle. Horizontal or vertical fitting. Lamp-size 75-100 and 150 watts. Diameters 8 and 10 inches. For emblem, circular, target signs, billboard lighting.



No. 892

No. 892. Angle. Lamp-size 25-60, 75-100, 150-200 Watts. Diameters 7, 8, and 10 inches. For localized side illumination.

No. 885. RLM Standard Dome. Lamp-size 100, 150, 200, 300-500 Watts. Diameters, 12, 14, 16 and 18 inches.



No. 885

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

Oamco Floodlights



No. 1139. Handy Floodlight for outdoor or indoor use. Reflector is steel porcelain enameled. Green outside, white inside. With adjustable bracket and base. Wired with 5 feet of rubber cord, and plug cap. Lamp-size 75-100 and 150-200 Watts. Diameters 8 and 10 inches.

Selected from the several types, our illustrations show the Outdoor Floodlight No. 1121, of Alzak aluminum, used for driveways, filling stations, parking areas, gardens, signs, exhibits, sealed against bad weather and dust by its heat-resisting lens and rubber gasket, with adjustable bracket to tilt up and down and turn in a circle, and with aluminum-bronze outside finish: and also we show Handy Floodlight No. 1139, for indoor or outdoor use, in gardens, yards, driveways, for lighting displays, signs, parks, etc., its bracket adjustable to tilt or turn—a very inexpensive floodlight.



No. 1121. Alzak Aluminum Reflector with heat resisting lens. Adjustable bracket and base. Wired with 5 feet of rubber cord and plug. Lamp-size 75-100 and 150-200 Watts. Diameters, 8¼ and 10¼ inches.



No. 1134

Oamco Vaportight Fixtures

These units are made for use in oil fields, refineries, flour mills, grain elevators, engine rooms, and damp places where electrical connections and lamps must be protected from acid fumes, dust, and vapors. They consist of copper hood tapped for ½-inch pipe, porcelain socket, and heavy, clear, steam-tight globe, with or without wire guard. A gasket between hood and globe makes it tight. Hood finished in aluminum-bronze. These are N.E.C. Standard. Listed Vaportight by Underwriters Laboratories. With or without standard dome reflectors.



No. 1134D

Economical Waterproof Bracket Fixtures

Made for farmyards, backyards, areaways, entrances, etc., and are listed by Underwriters Laboratories. No. 1067 is wired complete, an electro-galvanized 3/8-inch gooseneck bracket, with wall flange, lag screws, and synthetic enameled reflector, green outside, reflecting surface white, porcelain

socket. No. 877G, complete as shown, porcelain enameled, green outside, reflecting surface white. No. 1168 is wired complete, an electro-galvanized ½-inch conduit bracket, **porcelain enameled** reflector, green outside, reflecting surface white, porcelain socket.



No. 1067

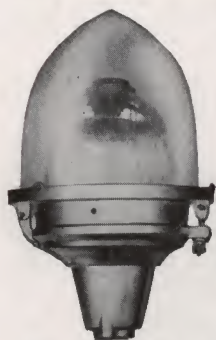


No. 1168



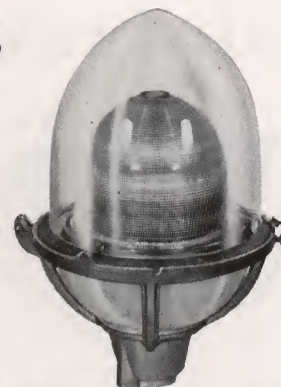
No. 877G

Pemco Sub-Station Fixtures

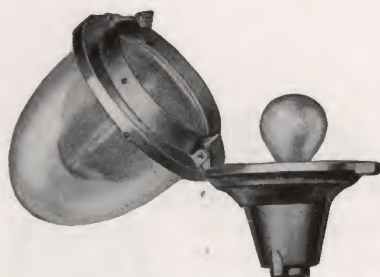


No. 528, 528-A, closed. A Sub-Station Light for 300-watt lamp, either in galvanized cast iron, or in aluminum.

Pemco Sub-Station Lighting Units are not mere inverted lamps, but are scientifically designed with refractors for proper light distribution to switches and to the ground without detracting from the upward light. An external focusing adjustment and hinged globe ring for easy relamping add to the practicability of these fixtures.

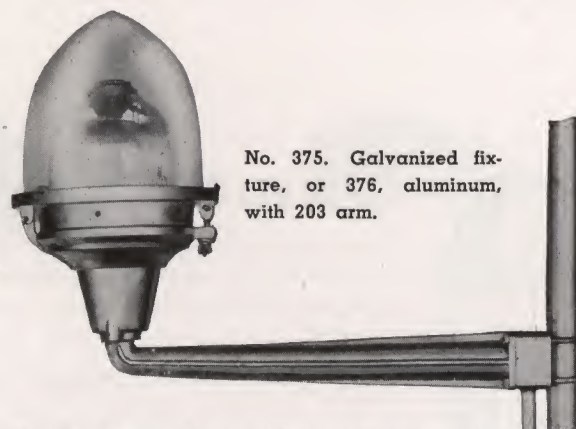


No. 526. Sub-Station Unit to be used in location where additional ground light is a requirement. Galvanized cast iron.



No. 528, 528-A. Open.

These Fixtures are for lamp sizes of 200 and 300-watt. No 528 B, of iron, ventilated, is for 500-watt lamps.



No. 375. Galvanized fixture, or 376, aluminum, with 203 arm.

Canopies are of either Galvanized cast iron or aluminum, as indicated.

Glassware is No. 4054 plain outer globe refractor.

No. 203. Bracket Arm in either malleable iron or aluminum, 24-inch extension.

Bakelite Bayonet-Type Series Socket

Pemco's Series Bayonet Type Socket consists of a green porcelain to which the bayonets and copper shell are attached. The bayonets are stamped from heavy spring bronze, so that the film will be held firmly in place. When inserted in the receptacle, these prongs automatically connect the socket to the line. In case of lamp breakage, the socket is easily removed, as the porcelain skirt extends down sufficiently for either the gloved hand or lamp remover to grip. Pemco's Socket will fit all types of Bayonet Receptacles now in use.

All Metal Parts Are Copper-Nickel Plated

No. 1201—Porcelain outer shell.
No. 1206—Composition outer shell.
No. 1210—Bakelite outer shell.



Nos. 1201-1206-1210

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

Minerallac Insulating Compounds

For Use in Cable Joints, Potheads and Terminal Bells

—o—

No. 1. A compound having the consistency of molasses. Not affected by moisture. It is specially effective in drying out tape, cloth, and between layers of such materials when wound on high-voltage electrical apparatus.

No. 2A. Cable Joint or Pothead Compound. Melting point 82 degrees Centigrade. One of its most important characteristics is its ability to adhere to metal or porcelain; especially suitable for use in warm climates.

No. 64. A compound suitable for use in mild climates where there is no great variation in temperature. A hard compound, with a melting point of approximately 93 degrees Centigrade.

No. 78. Cable Joint or Pothead Compound. Dense and very adhesive, with little shrinkage. Recommended as an all-purpose insulating material. Low moisture absorption; pliable. Recommended for voltages 6,000 and up. Melting point 90 degrees Centigrade. Dielectric strength 940 volts per mil at 30 degrees Centigrade.

No. 80. Pothead Compound. A hard compound for use on 6,000 volts and over. Melting point 130 degrees Centigrade. Tests 990 volts per mil at 30 degrees Centigrade.

No. 104. A semi-solid compound for use in Cable Joints on high voltage lines over 6,000. Melting point 50 degrees Centigrade. Dielectric strength averages 800 volts per mil at 30 degrees Centigrade.

No. 104A. A semi-solid compound with the same general characteristics as No. 104, except it has a lower melting point (35 degrees Centigrade). Average viscosity 800 seconds at 100 degrees Centigrade. (Sayboldt). For use on high voltage Potheads and Cable Joints where a low melting point compound is required.

LOW VOLTAGE COMPOUND

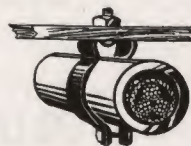
No. 20. High melting point compound for low voltage work. Softening point 127 degrees Centigrade. For use on low voltage distribution cables, street lighting, telephone work, etc., where a close seal is desired.

PACKING

All high voltage compounds—one, two and five gallon containers are steel, permitting compound to be heated in original can.

No. 20 Minerallac. —one, two and five gallon containers, or in drums approximately 400 pounds.

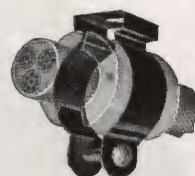
Minerallac Cable and Conduit Hangers



These hangers are made of CADMIUM-PLATED STEEL or EVERDUR METAL and are much stronger than cast iron hangers for the same purpose. They are easily and quickly put in place, so open wiring, conduit, and cable may be run with greater rapidity and be more compactly arranged than by the use of other hangers.

For Voltages Above 550 the Hangers Should Be Used With Insulating Bushings

Porcelain Bushings



Bushings for high voltage work, properly designed to get the necessary dielectric and mechanical strength, can be furnished.

Porcelain Bushings Are for Use With Minerallac Hanger of Same Catalog Number

Minerallac Jiffy Clip



For Tubing Specify Outside Diameter of Tube

Made in Cadmium-Plated Steel and Everdur to meet the demand for a substantial clamp for hanging pipe, conduit, and BX cable; also for mounting coils, etc., in radios and vending machines. Only one screw or bolt is required to hold the clip and the article firmly in place. It is made to afford great strength without being heavy or bulky, by having ribs drawn in the clip.

Made in All Required Sizes

ALTMAN DESK & TABLE PUSHES

Weighted Push Buttons in Round, Rectangular and Rectangular Name Plate Styles. 1 to 9 buttons, inclusive. Larger sizes are special. Standard finishes are Dark Oak and Mahogany. Special finishes at slight additional cost.



Matches the Finest Office Furniture

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

ESSCO REFLECTING SIGNALS

and

CLUSTERS

As Visible by Night as in the Day
Low Cost—Minimum Maintenance



No. 24

The 24-inch octagonal STOP sign, 16-gauge steel or cast aluminum. Baked enamel finish; 6-inch letters, raised or embossed. Finished black and yellow.



No. 34

SLOW sign 24-inch, embossed, 16-gauge steel, baked enamel finish in black and yellow, the word "SLOW" in 8-inch letters.



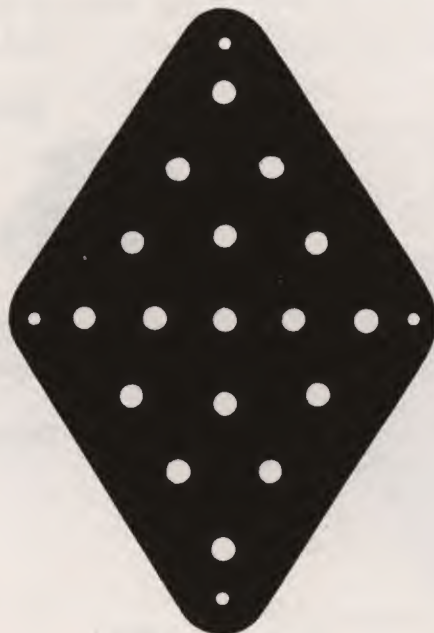
No. 59

A 6-foot steel channel-post, sharpened at bottom, with 10 large reflecting buttons. Drives into the ground with sledge or maul, and its brilliant column of light marks the obstruction at night.



No. 201

A cast-aluminum panel with the word STOP raised in 5-inch letters.



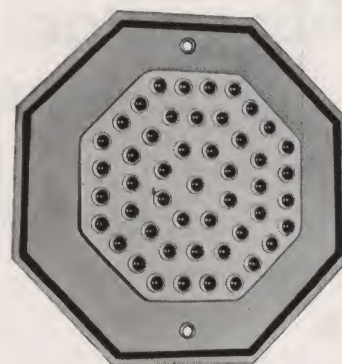
No. 17 Cluster

Diamond-Shape Target Cluster, casing aluminum painted yellow; steel back-plate black, showing around edge. Greatly used to mark highway and street obstructions.

Buttons furnished in Red, Yellow, or White, held in place by spring and locking-ring, cannot be pushed in or removed without taking off back-plate. Easy to replace if broken. Extremely wide reflecting angle. Aluminum castings with steel back-plates of rust-resisting steel, and 2 to 3 coats of baked-enamel finish.

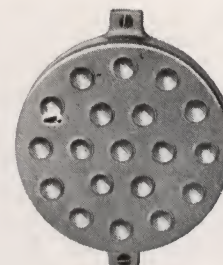
Those shown here are a few from our complete line. Write us what you need.

We Carry Several of These Items in Stock at New Orleans



No. 49

The 16-inch Octagon Cluster, aluminum casing, steel back-plate finished in yellow, border black. Just as brilliant by night as it is conspicuous by day.



No. 5

The 8-inch cluster of large buttons, aluminum casing finished in yellow or black. Caution marker for streets or highways.

Four-inch Target, finish black or yellow. In large use as a truck marker, conforming to usual state specifications.



No. 4

ESSCO EMBOSSED-STEEL TRAFFIC SIGNS

Signs shown on this page all are of U. S. Standard shapes and wording. They are six samples of hundreds of different wordings that can be furnished. We have all of the standard signs, and if you want yet something else we can furnish special wordings or special shapes to match your requirements.



NO PARKING

12x18 Inches
Red on White

Standard Wording

NO PARKING ANY TIME
NO PARKING BUS STOP
NO PARKING HERE TO CORNER
NO PARKING THIS BLOCK
NO PARKING LOADING ZONE
NO PARKING TAXI STAND

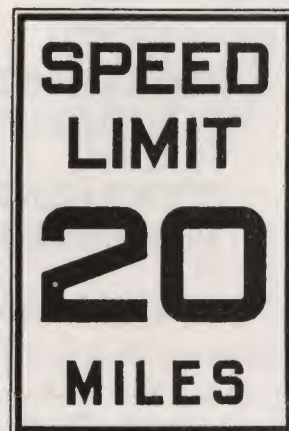
SPEED LIMIT

16x24 Inches
20x30 Inches
Black on White

End of Speed Limit, the same.
District Speed Limit, 20x28.

Standard Wording

RESIDENCE SPEED LIMIT
BUSINESS SPEED LIMIT
SCHOOL DISTRICT SPEED LIMIT
Furnished for any speed desired.



SQUARE CAUTION

18-Inch
Black on Yellow
Rounded Corners if Ordered

Standard Wording

CHURCH ZONE
CAUTION CROSS STREET
MEN WORKING

24-Inch

SCHOOL ZONE CHURCH
NO PARKING CROSS ROAD
SIDE ROAD NO DUMPING
MEN WORKING LOAD LIMIT
HOSPITAL ZONE ROAD CLOSED



DIAGONAL WARNING

24-Inch
Black on Yellow
Standard Wording
TURN CURVE
(Arrow left or right)
S CURVE SLOW
HILL WINDING ROAD
ARROW DOUBLE CURVE
FRESH OIL BAD CORNER

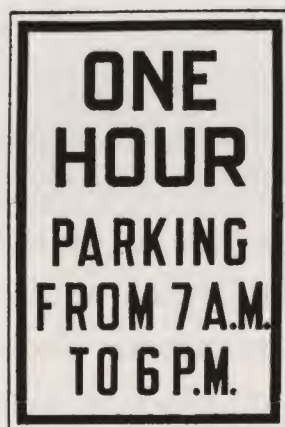
OCTAGONAL STOP

18-Inch and 24-Inch
Black on Yellow or Red on Yellow
Standard Wording
THROUGH STOP TRAFFIC
ARTERIAL STOP HIGHWAY
STATE STOP HIGHWAY
THRU STOP HIGHWAY
DEAD STOP END
STOP



POSTS

Eight-Foot Steel
U-Posts
Black or Galvanized
Finish
With or without
Anchor-plates



CURB SIGNS

51 inches high
13-inch base
18-inch round sign
Lettered both sides
Steel outer ring
(Not embossed)



These signs are of either 16- or 18-gauge metal, deeply embossed, finished with three coats of high-temperature baked enamel. Will not crack, chip, or peel.

Let us suggest the proper sign and save you money.

PORCELAIN ENAMEL IRON SIGNS

**Vitreous
Porcelain
Enamel**

is

**PERMANENTLY
DURABLE**

**PERMANENTLY
PRESENTABLE**

It Stays Attractive

Porcelain Fire-Enamel Iron Signs will not peel, will not discolor, will not rust or tarnish. These points are guaranteed. The signs that will always look brand new. Their **guaranteed life** is ten years, actual life whatever reasonable care will give. Replacement cost, therefore, is not a factor. The most inexpensive outdoor sign that can be bought.

Surfaces are as smooth as a china dinner-plate, beautiful as inlaid mosaic, and durable as steel. The process by which this everlasting porcelain is fused deep into the fibers of its metal base is exclusive, and neither this sign nor anything just as good can be made by another manufacturer.

Signs, commercial or for civic use, are made to order in any and every design and color arrangement that can be asked—for merchandising, for safety, for regulation, and can be equipped with any required standards or brackets, for illumination or not.

The manufacturers maintain a complete art department, to visualize your ideas and present them to the public in effective color and design.



This Directional Arrow

of our own design, and manufactured expressly for us, has taken in a big way throughout the State of Louisiana, and **is used extensively in the City of New Orleans.** Its meaning is unmistakable. Both arrow and letters can be seen from afar, and the Motorist cannot miss them. SIZE, 15x32 INCHES.

This is only one of the unlimited variety of directional, warning, and informational signs that we can supply in this permanent and attractive material, either of conventional stock designs or of colors, shapes, and sizes that municipal requirements or official preference may select. Their sturdy dependability makes them ideal in helping Municipal Authorities to direct and control traffic, and for other purposes of Safety, Law and Order.

Permanent---Attractive---Guaranteed

Catalogs, Bulletins, Price Lists, Detailed Information, Sent on Request

C. ROBERT CHURCHILL, New Orleans

TOLEDO TORCHES - - -

The Focus of Protection



CHAMPION No. 630

The essential protection of any construction job at night is focused in the safety lights being used. Be sure the lights used are distinctive so that they will attract and hold attention. Be sure they are dependable in any weather because it is during bad weather that you need them most.



LEADER No. 620

We have a variety of TOLEDO TORCHES. The two illustrated are "self-righting" types, the CHAMPION No. 630, and the LEADER No. 620. Both of these hold six pints of oil, and both will operate for upwards of 48 hours on one filling. The CHAMPION is of heavier metal, No. 14 gauge steel, hence is more expensive. The LEADER is of No. 20 gauge steel.

Our line also includes Truck Flares. These flares are contained in a heavy steel case holding either two or three flares, and so designed that it may be mounted in any position on the truck.

Get our prices for complete units, spare parts, burners, wicks, name plates, etc., etc.

Libbey Cataphote Reflector Buttons



No. 3 Chain with 1½" spacing, with ¾" Buttons

No. 3 Chain with 2" spacing, with ¾" Buttons

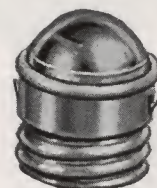
No. 5 Chain with 1½" spacing, with ½" Buttons



Unmounted Buttons

Inserted from rear of sign face, held fast by pressure of back plate.

LIBBEY CATAPHOTE Reflector Buttons are visible at night for distances up to 1500 feet, depending on weather conditions. Furnished in crystal, yellow, red, or green. **CHAINS** are cadmium-plated, and we recommend that they be painted the same color as the lettering on which they are to be used. Chain Buttons are shipped separate from chains, to permit dipping, and are shipped complete with theft-proof screws. They are in three sizes; colors, crystal, yellow, red, or green. It is important, when ordering, to specify whether the chains are for wooden or metal boards.



Mounted Buttons

Inserted from front of sign, screw-cap on rear of buttons holds them in place.

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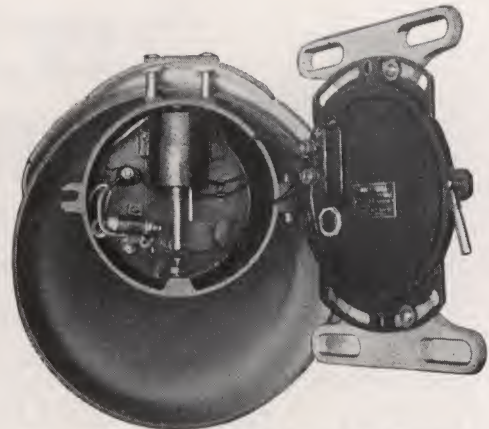
"LAKE" Bells for Bridge and Highway Crossing Protection

The cut on the right shows our No. 1212-G Slow Speed Loud Ringing Motor Driven Bell.

Where quality, slow striking, long distance sound, waterproof and dependable bells are wanted, at prices that are attractive, the "LAKE" Bells should always be used. They can fill any signalling requirements. They are a guaranteed product that brings repeat business.

Ordinary vibrating bells strike too frequently, with the result the sound waves coming from the bell shell crowd up on each other and dampen the volume of sound emitted.

The "LAKE" Crossing Bell strikes not to exceed 150 times per minute, thus giving the sound waves ample opportunity to follow each other and give a distinct high volume sound, loud enough to be heard at a distance of a thousand feet.



No. 1212-G 12" LAKE Bell Opened Showing striking Mechanism.



Cut No. 1



Cut No. 2

"LAKE" Bells derive their actuation by using energy supplied to a solenoid, and gravity. This method produces the slow acting, loud ringing effect desirable for a crossing bell. The use of any bell less than 12" is not recommended.

These bells are not subject to wear, do not require oiling, and are not affected by the elements. Salt water, sulphur, cold, smoke and the like do not harm them at all. Under severe acid conditions, the worst that could happen would be for the gong shell to develop a dirty appearance. The metal, however, is so thick that it will never pit to the extent of injuring the sound or action of the equipment.

We illustrate here in the cuts to the left our loud ringing slow speed bells with and without guards for railroad crossing bridges, traveling cranes, and noisy factories. They are regularly furnished in Monitor Type (see cut No. 1) and Standard Type (see cut No. 2).

These bells are furnished in voltages of 110, 220, and 440, for both alternating current and direct current service. The list prices are the same for either A.C. or D.C.

The bells range in diameter from 3" to 12", and can be furnished in chromium, or cadmium plated steel, or in polished bell metal.

ELECTRIC GATE LAMPS



The WRRSCO Line of gate lamps includes lamps of various sizes and designs for both one-way or two-way indication. If desired automatic circuit controllers can be supplied so that the lights will burn only when the gate is in motion or is in the down position. WRRSCO Gate Lamps are used extensively in railroad crossing protection and have proved themselves extremely satisfactory. They are so properly designed that they give excellent indication, even in daylight, with lamps of low voltage and wattage.

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Railroad Electric Crossing Gate

Protection for the Public

For protecting the public at railroad-highway-grade-crossings and bridge approaches, the electric crossing gate is rapidly taking the place of all other types.

With highway traffic constantly increasing in volume and speed, it is more important than ever before to have fast, reliable gates at crossings—gates capable of standing up under most severe 24-hour service.

The WRRSCO Electric Crossing Gate has been designed to meet the requirements of present-day usage. Due to its rugged construction this gate easily handles roadway arms up to 50 feet in length, with an additional 18-foot sidewalk arm. We have records of gates operating 400 times daily on a railroad crossing.

A specially designed limit-switch limits the gate's travel in each direction and may also handle gate warning signals, indication lights, or interlocking circuits, if desired.



Highway - Railroad CROSSING PROTECTION



Railroad Crossing Signals—"Buck Saw" Type. Reflector Lens Sign, black background, white letters, clear reflector lenses. See cut. For use in numerous combinations. For example, with Standard A.R.A. Flashing Lights, Crossing Signs, Crossing Bells, and Floodlights. Send details

of what is desired. We will gladly quote on any combination. Ask for special catalogue.

WIRES and CABLES

There is not a whole lot that we can say on this subject because to a greater or lesser extent "wire is wire".

However, we wish to impress upon our clientele that while "wire is wire" there are different grades, and it is needless to say that ours is second to none. The factory that we represent and from whose stock we draw, manufacture a complete line, which includes especially:

Flexible Armored Conductors	Service Entrance Cable
Non-Metallic Flexible Cable	Non-Metallic Sheathed Cable
Leaded Cables, Etc.	Steel Taped

We wish to call your very special attention to the growing demand and use for Non-Metallic Sheathed Cable in connection with our Bakelite Outlet and Switch Boxes. Bakelite specialties of the kind are here to stay—they are practically indestructible, and the demand for them for use in connection with Non-Metallic Sheathed Cable is increasing daily.

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CROMPTON TONG TEST AMMETER

INSTANT CURRENT MEASUREMENTS

- No Breaking of Circuit
- No Shutdowns
- No Shunts
- No Transformers
- No loss of Time
- No loss of Labor
- No loss of Production
- Done with One Hand
- Accurate—Safe
- Cannot Burn Out
- Range Varied Quickly
- Measures A. C. and D. C.
- Light to Carry
- Low in Price

What Tong Test Does

- It measures A. C. or D. C. Instantly and Accurately.
- It gives Accurate Readings through insulation.
- It eliminates the use of other instruments.
- It makes an easy matter of your old slow, tedious job.

Simply by encircling the conductor with the tongs, and closing them, a clear, accurate reading is instantly registered on the scale. They open by a slight pressure on the trigger, and are self-closing. Cost is less than half of that for old-style equipment. And the application simple.

A compact precision-made instrument, it weighs only $2\frac{3}{4}$ pounds, and because of its small size is practically indispensable for making measurements on poles, cranes, or in all close quarters or difficult positions.

It has a guaranteed accuracy of 2% on alternating and 4% on direct current. The movement units are instantly detachable and mechanically interchangeable. Tong Test operates practically independently of voltage, wave-form, or frequency.

The Tong Test can be used safely on properly insulated cables carrying up to 2300 volts. For bare conductors where voltage exceeds 440 and is under 6000, a high-voltage attachment is supplied, a special handle easily used for load tests which normally would be inaccessible. For bare conductors rubber-insulated tongs are supplied.

TONG TEST USES

1. For measuring alternating or direct current in all lines, determining the current balance in a three-wire system.
2. For determining load distribution of transformers or generators operating in parallel.
3. For determining the load on transmission lines or feeders.
4. For checking loads on switches, fuses, motors, transformers, and generators.
5. For measuring starting currents and locating open phases. And for many other uses that your own experience will suggest.



TRAF-O-DOTS, The Permanent Markers



Traf-O-Dots **stay put** in any type of pavement, once they are properly installed. Their polished, satin-finished stainless-steel discs stay bright in all kinds of weather. Traffic will not crush them. The ribbed under disc, at left, supports them, prevents burial in asphalt streets. The corrugated spike holds them firmly. No clatter, no turning. Long lasting. Sizes, 3 $\frac{5}{8}$ or 2 $\frac{1}{2}$ -inch diameter. Also available in brass or chrome-finished carbon steel.

GENERATORS—MOTORS

In addition to the lines illustrated in this booklet we have excellent connections with manufacturers of small unit A.C. and D.C. Generating Plants, Wires, Cables, Radio Intreferece Eliminators, "Meggers", Christmas Tree Decorative Lighting Sets, etc., etc.

MAZDA LAMPS

We show no illustrations or data covering Incandescent Lamps of any sort. This because of the fact that Incandescent Lamps are too well known—and prices are uniformly exactly the same.

Our brand is "WESTINGHOUSE"—Nuff sed.

STOP RUBBER TRAFFIC SIGNS

A FLEXIBLE RUBBER panel 22 inches long standing upright in the pavement, 7 inches high, with letters of Federal Yellow rubber vulcanized into the black rubber background. Cleated base of creosoted wood, with brass anchor-plates entirely enclosed in rust-proof case. This marker is embedded in the middle of the street, and may be read easily for 500 feet by daylight, for 250 feet at night. It is simple to install, simple to replace or refill. There is nothing else like it—a sign that commands attention day and night, plainly visible through rainy weather, flexible and not a hazard in the street, economical, efficient, nationwide in use, and respected by motorists everywhere.

STANDARD DESIGNS

SLOW STOP DANGER

NO U TURN NO LEFT TURN

KEEP RIGHT RIGHT TURN

HOSPITAL QUIET

SAFETY ZONE SCHOOL SLOW

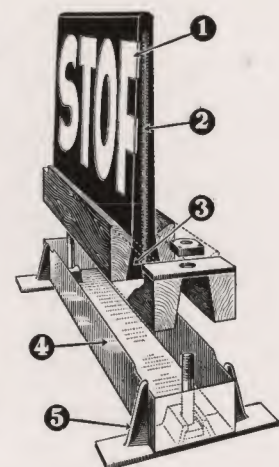
1. Thick letters of yellow rubber are inlaid—cannot wear off.

2. Fabric reinforcement insures upright position.

3. Wedge-shaped base holds rubber slab firmly in place.

4. Non-rust case embedded permanently in pavement.

5. Brass anchor plate and bolt cannot rust;—refilling is easy.



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C. ROBERT CHURCHILL, New Orleans

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**ELECTRICAL
MECHANICAL
RECOMMENDATIONS**

**TRAFFIC CONTROL
SAFETY DEVICES
VENTILATION
LIGHTING
METERS**

C. ROBERT CHURCHILL

Catalog—No. 100

NEW ORLEANS